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STATE PLANNING

**REVIEW OF ACTIVITIES
AND PROGRESS**

NATIONAL RESOURCES BOARD—1935



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STATE PLANNING

A REVIEW OF ACTIVITIES AND PROGRESS



NATIONAL
RESOURCES BOARD

JUNE 1935

NATIONAL RESOURCES COMMITTEE

INTERIOR BUILDING

WASHINGTON

September 27, 1935.

The PRESIDENT,

The White House.

MY DEAR MR. PRESIDENT:

We have the honor to transmit herewith a report of the National Resources Board on "State Planning—Review of Activities and Progress."

This report shows the remarkable and healthy growth of State planning and demonstrates the value and importance of State responsibility for planning endeavor. At the same time, the report shows the effective cooperation which has been developed between planning agencies of the States and those of the Federal Government.

The members of the committee have not all had an opportunity to give full consideration to all of the points involved. However, they endorse the recommendations in principle and desire to indicate their continuing interest in and support of this State planning movement.

Sincerely yours,

HAROLD L. ICKES,
Secretary of the Interior, Chairman.

GEORGE H. DERN,
Secretary of War.

HENRY A. WALLACE,
Secretary of Agriculture.

DANIEL C. ROPER,
Secretary of Commerce.

FRANCES PERKINS,
Secretary of Labor.

HARRY L. HOPKINS,
Federal Emergency Relief Administrator.

FREDERIC A. DELANO.

CHARLES E. MERRIAM.

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ACKNOWLEDGMENTS

This volume and account of State Planning Progress has been compiled from circulars of the National Planning Board and National Resources Board, from reports of State planning and land planning consultants, official publications of State planning boards and from special statements and reports prepared for this purpose.

The circulars and bulletins providing suggestions for the organization and work of State planning boards which have been issued from the Washington office during the last 2 years were prepared by the executive officer, Charles W. Eliot 2d, and the assistant executive officer, Harold Merrill, with the assistance of Maxfield H. Dunlap.

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FOREWORD

In the development of our American national resources there have long been many planning agencies at work, some of them are public, some private, and some semipublic. Of the public planning agencies, some are National, some State, and some local in nature. In a comprehensive program of planning for the wise use and development of our national resources it is indispensable that these various groups be brought into the best working relations with each other to avoid duplication, waste, incompetence, and futility. The new State planning boards fill a gap in the organization of planning endeavor and provide a new tool for effective coordination and instigation of planning efforts.

The development of State planning boards is a striking evidence of the trend toward an over-all view of the resources and possibilities of the several States of the American Union. These 46* boards represent the desire of the people of the several States, expressed through their legislatures or their Governors, to inventory the natural and human resources of the commonwealths and to plan for their better and more effective use.

The meaning of the State planning boards which have recently sprung into life is the expression of a desire to—

- (1) Take a comprehensive view of the resources and planning problems of the several States;
- (2) To relate the work of the local planners, already well under way in many cities and in a number of counties, to the work of the State as a whole;
- (3) To relate the work of the States to each other by better cooperation and coordination, as in the case of water uses;
- (4) To relate the work of the State planning agencies to that of the National Government; and,
- (5) Finally, to relate the work of the several public planning agencies to that of private and semipublic agencies within the State, as in the development of transportation and power.

It is plain that there are types of situations in which there is either national planning or no planning. The Constitution of the United States recognized this in the establishment of national authority and powers, among others, over interstate commerce and currency to be developed with the needs of the Nation. But it is also plain that there are situations in which planning will be local or not at all—problems in which the solution of the question must grow out of the life of the local area as an expression of its special and local needs. Wise planning provides for a working balance between local and central, public and private initiative, realizing that progress may be smothered by an excess of one as of the other, and employing its efforts in trying to fit functions to areas in the interest of the whole Nation.

The creation of State planning boards was an inevitable outcome of the need for bringing together more closely the somewhat scattered planning agencies of the State, on the one hand, and on the other of draw-

There has been planning of many kinds in many States for many years, as is seen in boards and commissions dealing with mineral resources, with land use, water, forestry, agriculture, industrial development, the protection of workers, the organization of public-welfare services, the organization of education, and with many other subjects related to the needs of the particular State. The conservation movement and the public-welfare movements are striking illustrations of State activity directed toward better utilization of human and natural resources. The personnel, techniques, and achievements of a number of agencies concerned in these developments have attracted wide-spread attention, and have added to the health, safety, comfort, and welfare of their citizens. The State universities, land-grant colleges, and other educational and research institutions in the States have, of course, contributed greatly to the development and planning of great areas of State resources, natural and human alike.

ing together as effectively as possible the planning agencies of the National Government and those of the commonwealths, as in the case of land, water, and mineral use.

It may be pointed out that other attempts at better State organizations and policy formulation have sprung up concurrently and are aiding in the same general movement. Among these new services are the American Legislators Association with its important machinery for the interchange of information and experience of the State legislators and for the elaboration of problems of the States. Conspicuous among related organizations are the Councils of State Government, directed toward the formulation of programs of legislation in individual States, and the Commissioners on Interstate Cooperation.

Other important moves in the same direction are seen in the establishment of professional associations

* 45 on June 15, 1935. Massachusetts board established by law Aug. 9, 1935.

by important groups of State officials,¹ for which the Public Administration Clearing House performs coordinating and informational services. Of especial significance in this connection is the organization of the American Society of Planning Officials, composed chiefly of local and State planning officials, concerned with the improvement of the standards and methods of planning practice.

A parallel intensification of interest and support from private organizations has developed among professional and other groups interested in planning as a technical, nonpolitical approach to current problems. Engineers, architects, city planners, lawyers, economists, and many other groups have contributed methods and thought to the movement for State planning. Through such organizations as the American Planning and Civic Association, the American Country Life Association, National Recreation Association, and many others, citizen support of planning in this sense has been invigorated.

The vitality of this revival of interest in State planning affairs, too extended to review in any detail here, illustrates the broad sweep of the tendency toward more effective planning of State problems and the trend toward closer cooperation of the States in the attack upon local State questions, as well as the movement toward State-Federal cooperation. On the whole they indicate the strength of the trend toward the improvement of State and local governments, toward more effective use of local resources, toward a sharper analysis of State and local programs of expenditure and activity.

The State planning boards are thus a part of the same general movement which emphasizes the importance of combining local, State, and national initiative and planning, if we are to achieve the highest and best use of our American resources. They indicate the general recognition by all groups, regardless of party or other affiliation, of the importance of taking an overall view of the resources of State and localities, and of beginning the practice of looking forward in the programing of the resources of the respective areas. Obviously these resources, needs, and programs will vary widely in a vast domain like that of the American Nation. Flat uniformity in the approach to the solution of such diverse problems as are encountered in irrigation of the Central Valley of California, the coal mines of Pennsylvania, and the recreational opportunities of New England, is neither to be expected nor desired.

¹ Among these are the American Public Welfare Association, the Civil Service Assembly, the Municipal Finance Officers' Association, the National Association of Housing Officials, the International Association of Public Works Officials, etc. Important organizations of local officials are the U. S. Conference of Mayors, the American Municipal Association, comprising some 30 State municipal leagues, and the International City Managers Association, all expressing the interest of local governmental groups in higher levels of governmental achievement. Of deep significance in a neighboring field are the Judicial Councils now being set up in the States.

While conservation and planning agencies have been developed from time to time in the various States and have accomplished notable results in many fields, the planning boards are a unique tool in the organization of State government. In one sense the Legislature of the State is itself a planning board, and likewise the Governor and his assistants are charged with broad responsibilities in the formulation of State policies. But the State planning board may be looked upon as a "general staff" for the executive of the State, gathering and analyzing facts, observing the interrelation of different State policies, proposing from time to time alternative lines of State procedure, constantly preparing and presenting to the authorities its findings, conclusions, and recommendations in the field of long-time programing.

It cannot be too strongly emphasized that the function of these boards is not that of making final decisions upon broad questions of policy—a responsibility which rests firmly upon the elected representatives of the people. Such a board will be useful in proportion as it is detached from immediate political power, serving as the technical tool of the democracy. In this field the intelligence and vision of a board, the respect and confidence it enjoys among groups whose cooperation is indispensable, are far more important than large statutory powers or bristling governmental sanctions.

From this point of view, the State planning boards offer another illustration of the flexibility of our democratic government, and the ways and means by which it may be adapted progressively to emerging problems. This movement is comparable to the movement for the merit system, for the reorganization of State administration, for the development of budgetary control in the American States.

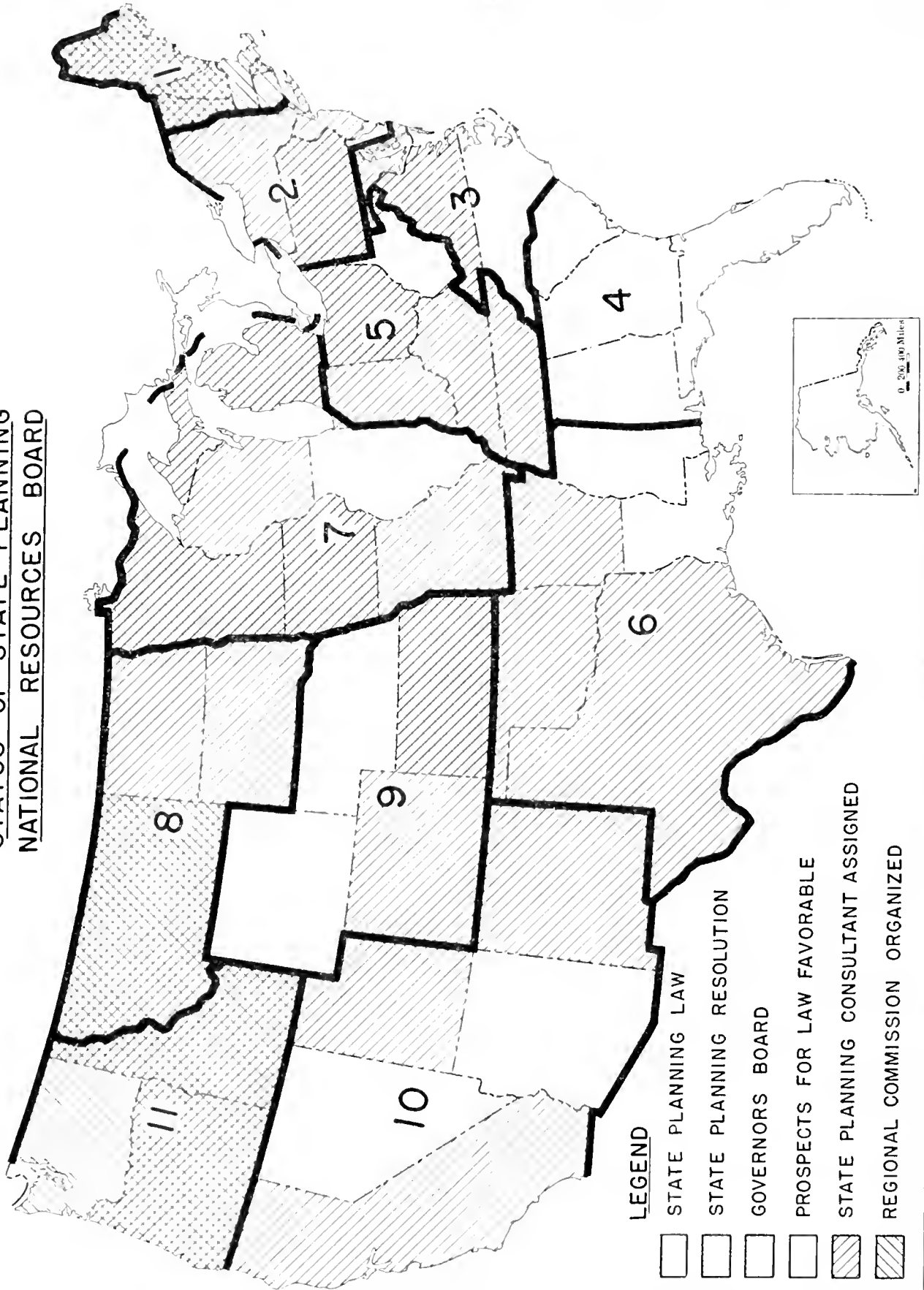
The method or technique of planning as developed by the State planning boards has been an extension and expansion of the survey and planning work utilized in city and metropolitan planning programs. As in the case of the National Resources Board, the first efforts have been concentrated in the fields of land use, water resources, or public works, with a view to utilizing energy and funds, which are being expended, in the most advantageous manner and to return the largest long-range values. By dealing with immediate and familiar problems, and applying to those problems the methods of research and planning, public understanding of the purposes and value of the State planning boards has been greatly advanced.

Nor is it to be presumed or desired that within a few months complete plans should spring full-armed from the several State planning boards. Long-time plans are not readily improvised. They are rather the result of careful collection of facts, penetrating

analysis of them, and mature thought regarding the program that grows out of the situations disclosed. There are, to be sure, emergencies when action is as urgent as when inaction means certain disaster, but, normally, significant plans are shaped slowly, crystallizing the thought and experience of a time and place. The first steps of planning boards, whether in city, county, State, region or Nation, have been to gather together the important data regarding human and natural resources, and to orient themselves in the given situation. For this, time and experience are indispensable.

The surprising thing is not that our American State planning boards have not done more, but that they have made as rapid progress as is indicated by the reports presented to the public, and that so many collateral agencies are arising to support them in the tasks upon which they are engaged. The encouragement and assistance given by the United States Government has been many times justified in the impetus to sounder programing of the resources of States and localities, in the greater interest in inter-State and regional cooperation, in the more intimate coordination of States with the custodians of the national interest.

STATUS OF STATE PLANNING NATIONAL RESOURCES BOARD



STATE PLANNING

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FINDINGS

Careful study of the many important volumes and reports issued by the State planning boards, contact with Board activities, and independent observation, lead us to the following conclusions:

1. Substantial progress has been made by the 46 boards recently established—advance more rapid than might have been expected in view of the shortness of the time and the confusion of the whole economic situation. This progress has been particularly marked in the collection of basic data, in preliminary and exploratory surveys, in the beginnings of long-time programming of public works, in projects for better land utilization, as well as in the other areas of interest to particular States.

A long step forward has been taken in the direction of more effective utilization of the natural and human resources of the different States, and, if this beginning goes forward at the present rate, we may reasonably look forward to striking improvements in the organization of affairs of the type with which a State may deal. City planning, county planning, and State planning, taken together, are being developed and coordinated in a manner that cannot fail to promote the advantage of State and local communities.

Strong testimony to this effect is given in the messages of a number of governors who recommended the establishment or continuance of State planning boards, and additional proof is supplied by the action of the State legislatures who gave their sanction to these agencies and provided out of meager revenues something for their maintenance.

2. Excellent cooperation of State and national authorities has been obtained through the general and land use consultants who aided in the work of both levels of government, and who were able to contribute greatly to the elaboration of policies both of local and of general application. The land-use program is one evidence of such cooperation. In the administration of relief, likewise, the local and the State planning authorities were able to effect an important form of cooperation through service to the Relief Administration in selection of worthy projects and in the employment of considerable numbers of persons on planning projects under Federal Emergency Relief Administration and Civil Works Administration, notably in the urban communities.

3. The several State planning boards through the district chairman and regional organization were able to give consideration to a number of regional problems

transcending the jurisdiction of any one State, as in the cases of the Pacific Northwest Regional Planning Commission and the corresponding organization in New England. The whole subject of regionalism is reserved for a forthcoming report of the National Resources Committee, but it may be said in passing that the cooperative attitude of the State planning boards has done much to indicate possible lines of effective action in areas which are neither State nor national, but which offer problems requiring the concurrent action of a range of authorities on various levels.

4. The State planning boards, important as unique tools in State government, are an admirable illustration of the flexibility of our democratic system. Many scattered types of planning have been developed in States in times past, but the new State planning boards represent a new approach to the problem of providing democracy with the best possible technical tools.

While all basic decisions must be made by the political authorities to whom this responsibility is entrusted by their electorates, the planning board acts as a general staff for the executive of the State, supplying information, analyses, interpretations and long-time policies for his disposition. Such boards, properly constituted and possessing the confidence of the community in their integrity, intelligence, democracy and common sense, greatly strengthen the mechanism of our State governments.

Too great centralization in Washington is not desirable even if possible, because planning is an attitude and a practice which must command the confidence and invite the cooperation of wide groups of people. It must come from the bottom up as well as from the top down, from the circumference as well as the center. Indeed if there were not local initiative and planning impulse, it would be necessary to continue its cultivation and stimulation. Fortunately, the spirit of planning is strong in the American local tradition, in industry and engineering, in States as well as Nation; and the task is that of bringing together and making effective the various planning agencies so that the largest results may be achieved.

RECOMMENDATIONS

We submit the following recommendations growing out of the work of the State planning boards and out of other activities of the National Resources Committee in relation thereto:

1. In view of the demonstrated usefulness of State planning boards both to the localities and to the Nation, we recommend the continuing support of these agencies. In no other way thus far developed is it possible to bring about so ample a measure of cooperative planning of our resources, local, State and national, at so modest a cost and with so great a possibility of progressively larger results.

We recommend that the States provide for permanent establishment and adequate financial support for State planning boards where this has not already been done. We further recommend that for a developmental period and to promote interstate and Federal coordination, Federal aid be extended to State boards in the form of technical consultants and emergency personnel as at present, or by loan of Federal personnel or by other ways and means that may seem appropriate.

2. We recommend unrelenting efforts in the direction of closer cooperation between State and Federal governments in the many practical channels through which this may now be effected without injury to the pride or prestige of either, and without disturbing the just balance between national and local authorities. One of the greatest losses in public expenditure lies in the frequent failure to pool available resources and personnel freely.

The interrelation of the personnel of different jurisdictions, the overlapping of some forms of administrative arrangements, in some cases the designation of the same person as the agent of more than one authority, the loaning of personnel by one government to another¹—these are examples of the friendly working together of all of the taxpayers' agents. Many fine examples of this are seen in agriculture, in public health service, in the administration of justice, in park and recreation organization, in public welfare, and at many other points. There is still, however, great opportunity for the further elaboration of such forms of personnel and other coordination, to the advantage of all of the jurisdictions concerned and to the great improvement of public service.

The State planning boards have unusual opportunities to promote such cooperation between various agencies of government, both within and without their States, and have indeed utilized these possibilities on many occasions.

Especially in the field of public administration, as distinguished from general policy, it is possible and

feasible to bring about many State-National arrangements, adjustments, and accommodations, which will increase the efficiency of administration while reducing its cost—and that without sacrificing the independence of the authorities concerned.

3. We recommend that the State boards consider carefully the possibilities in the direction of closer coordination of efforts in the development of our natural resources upon the general lines indicated in the recent report of the National Resources Board. Planning agencies dealing with the broader aspects of water uses, land use, and mineral use have already been established, under this committee and are available for purposes of extending their friendly offices in the unified and systematic planning of the development of our resources. In land use notable progress has already been made; in water uses and mineral use the advancement is also significant as indicated in the recent report on stream pollution and in a variety of other steps toward systematic organization of resources.²

4. We recommend that the State boards consider carefully, among other possibilities, the plan suggested by the National Resources Board in its report of last December, for the establishment of a permanent public works administration. The arrangement proposed would provide for a continuing organization to deal with the coordination of a wide range of Federal public works projects on a technical basis, but would also enable this agency to take the lead in the coordination both of State and Federal works programs over a period of years. Such coordination is of prime importance in view of the normal annual expenditure of some 3 billion dollars for public works, National, State and local, and the possibility of greatly improving the planning, construction and operation of these works—a total of perhaps 26 billion dollars in the period from 1935 to 1944. The plan involves a continuing development and revision of long-range programs of public works in which the State planning boards would properly play a major role. The services of United States engineers, the good offices of the several agencies of the Federal Government and in some cases perhaps Federal grants might be employed in cooperation with the facilities of State and city engineers and technicians for the purpose of developing a sounder national program of public works. The cooperation of the State boards in such combined planning would be of a very great significance; and their attention is directed to this important possibility.

¹ On the loaning of Federal personnel, see the National Resources Committee study, *The Loan of Expert Personnel Among Federal Agencies*, by James W. Fesler.

² A later report on Regionalism will deal more fully with various cooperative efforts now under way among the several States.

PART I. DEVELOPMENT OF STATE PLANNING

Looking backward over the last 50 years, we can easily see that lack of planning has caused appalling losses in our American States. Enormous and incalculable damage has been brought about by flood, erosion, drought, stream pollution, ineffective land use, waste of timber and mineral resources such as oil, much of which might have been avoided by foresight and planning; human wastage from lack of proper health plans, from bad working and living conditions, from lack of adequate educational and recreational facilities, insecurity and distress from lack of plans for social welfare. This tragic loss of human and natural resources, with the human suffering involved, might in large measure have been prevented by sound planning in our American States.

The fact is, however, that from time to time some of our States have been dominated by exploiters who were interested in wealth but not always in the commonwealth. These interests were planning while the public slept. The American State need not be a twilight zone in which anarchy prevails but may become an organized and effective force for protecting and developing the resources of the common weal and helping to make the great gains of our civilization an actual fact in the daily lives of our people.

The present movement is a unified State attack on the problems of waste and loss which have been so costly to the taxpayer and the citizen. This is an effort to combine all of our forces in a constructive movement for better use of our State resources and for the attainment of higher standards of American living. Much has already been done in many places by conservation and other movements of various sorts, but much remains undone. Progress may be achieved by bringing together the many scattered agencies in our States and uniting them in a well-planned development of all of the assets of the State—human and natural—and for the better utilization of these resources for the welfare of the whole people of the States.

Achievements such as the protection of the rural schools in New York State, the land zoning policy in Wisconsin, the long-time program of public works in Ohio—are all far-reaching values in these Commonwealths. As we examine the preliminary surveys in the several States, it is overwhelmingly evident that there is urgent need and broad opportunity for many other advances of this practical type in different sections of the country.

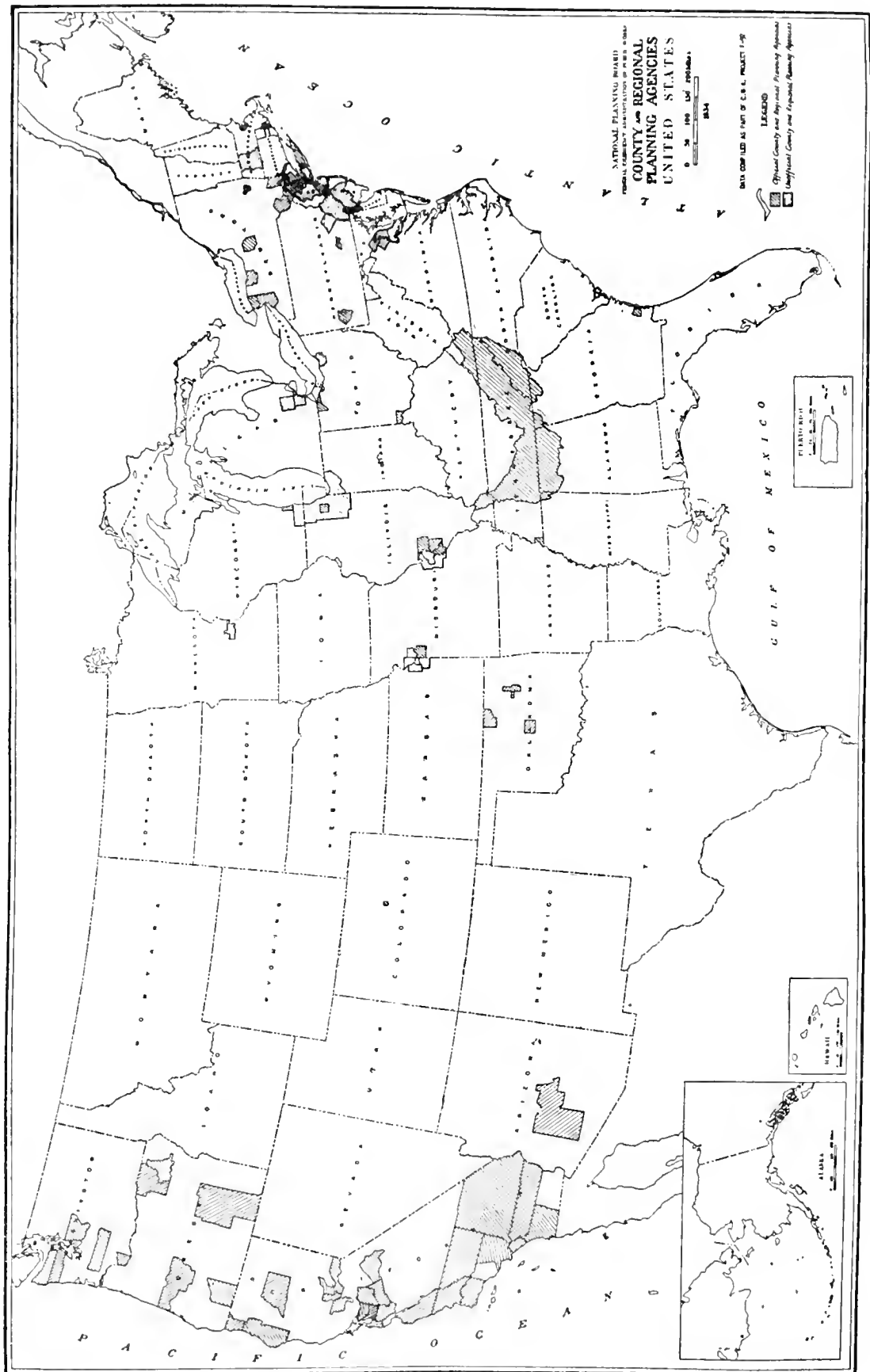
Not everything can be planned by the States alone, for some problems are national in scope and require the arm of the Nation. Others are local and can best be dealt with by the city or other locality. Others require the cooperation of several States or parts of States. Still other plans will be formulated by individuals and by voluntary associations as in industry, agriculture, labor, education; but it is vital that the State planning agencies be organized and ready to extend a hand to the locality, the Nation, some sister State or some voluntary association in organized cooperative planning for flood control, land use, stream pollution, working and living conditions, and social welfare.

State planning has developed naturally out of experience with city planning and from the need for State coordination of separate planning movements in different fields. Planning has grown both in the size of the governmental units in which it operates and in the number of subjects which it touches.

Familiarity with the idea of planning a house and its surrounding garden has led on into planning for a neighborhood or subdivision and, from that point, into planning and zoning for the protection of the larger community—for a whole town or city. The lack of governmental forms for coordination of city and sub-urban development emphasized the need for metropolitan or regional plans which, in some cases, have overlapped State lines. In California, New York, New Jersey, and many other States, county boundaries

were utilized for planning, which thus became county planning. It was therefore the next logical step to create State planning agencies, utilizing State boundaries and the State's authority for planning work.

Although one interpretation of city planning might emphasize the accumulation and interrelation of houses, lots, and neighborhoods, perhaps a more significant contribution was the idea of a "comprehensive" city plan which designed facilities for the whole city in one particular sphere of activity, as, for instance, a complete park system, a complete street system, or a zoning system. Then each of these general plans for particular fields of activity had to be related to all the others. In the same way over-all State policies have had a large influence in energizing the State planning movement. Separate planning work has been pushed



for the development of State policies on conservation, recreation, highways, housing, forestry, and stream pollution, but planning for these policies and for a great variety of other activities has lacked coordination. Individual efforts have too often been frustrated by lack of a general coordinated State plan. The State planning boards set up during the last 2 years reflect both the influence of planning by jurisdiction and planning by subjects.

City Planning Background

The idea of advance planning for arrangements of houses, streets, and shops goes back to the days of Rome, Greece, and Egypt,¹ and cannot be called a new idea. In America, we have examples of early town planning in Williamsburg² and Philadelphia,² and L'Enfant's plan of Washington³ is still generally recognized as one of the greatest city plans of all time.

A revival of interest in civic improvements in this country was stimulated by the Chicago World's Fair of 1893 and by the development of park systems in and around such cities as Boston and Minneapolis. The modern city planning movement dates from that period. Beginning with the Washington plan of 1901 and the plan of Chicago in 1909 the early work emphasized the "city beautiful" with proposals for grouping of public buildings⁴ and park development.⁵ As other cities and other subjects came under consideration, mottoes of efficiency, practicality and similar motives took first place. Systems of major streets, playgrounds, zoning protection of residential and business areas, and housing studies were more prominent in the printed city planning reports during the decades following 1910 and 1920.⁶ The movement spread to many cities—large and small—with support from such varied sources as chambers of commerce, garden clubs, child welfare groups, and, of course, from city officials.

A survey of city and town planning⁷ conducted by the National Planning Board a little over a year ago showed 739 city and town planning agencies⁸ then in existence, 1,244 cities with zoning regulations, and approximately 218 cities with general or comprehensive city plans.

The scope of city planning grew beyond the boundaries of municipal corporations, and metropolitan or regional plans were needed. The Boston metropolitan water, sewer, and park systems were among the first

planned on a regional basis, but the same kinds of problems faced many other larger cities. As might have been expected, the largest undertaking of this sort was set up in New York. It was carried on through the efforts of Charles D. Norton and Frederic A. Delano and the Russel Sage Foundation. The survey and planning reports of the regional plan of New York and its environs inspired similar work in the Philadelphia Tri-State district, around Chicago, St. Louis, Washington, Boston, Los Angeles, and other metropolitan areas.

The county unit was utilized for some of these metropolitan planning studies⁹ and was also the natural area for rural planning. A county planning movement has been growing in recent years, especially during the past year, so that today over 250 counties (particularly in California, Wisconsin, and the Pacific Northwest States) are now organized for planning.

State-wide Planning Movements

Long before State planning was a recognized term, planning work was inevitably going forward as a part of State government. A series of separate planning activities was started concerning conservation, State highway plans or public works, with little or no coordination among the several elements. For instance, planning to provide educational opportunities and to combat illiteracy was a primary consideration in the early colonies and has remained a State function ever since. Our public-school system, State universities, and agricultural colleges are evidences of such planning.

A movement for preservation of scenic and historic sites began about 1890; State planning in that field started with the organization of the trustees of public reservations in Massachusetts and the American Scenic and Historic Preservation Society in New York. The more general conservation movement soon followed with special reference to forests and game, and resulted in many State conservation commissions.¹⁰ Planning for health, particularly for the water supplies of large cities, caused the organization of State health departments, and the "good roads" movement led to Statewide planning for highways under separate State highway organizations.

The prevalence of abandoned farms in the hill counties of New York precipitated a study of that situation, and provided an analysis of the historic trend of population and activity toward the valleys of the Hudson and Mohawk Rivers.¹¹ The same basic problem of land utilization in a different form was faced by Michigan in the cut-over forest area, and there an economic survey of land problems was inaugurated.

¹ Cf. *Outline of Town and City Planning*, by Thomas Adams, 1935, pp. 33-142.

² Cf. *Land Planning in the U. S.*, by Harlean James, 1926, pp. 29 and 31.

³ Cf. *Annual Reports of Nat. Cap. Pl. and Plan. Commission*, 1926-32, inclusive.

⁴ As for example, Washington, Cleveland, Albany, Denver, Madison, Wis., and San Francisco.

⁵ As Chicago, Kansas City, Portland.

⁶ See annual reviews of *City Planning* by Theodora Kimball Hubbard in *National Municipal Review and City Planning*. (Quarterly.)

⁷ *National Planning Board Circular Letter No. 11*, May 15, 1934, and *National Planning Board Final Report*, 1933-34, pp. 5 and 6.

⁸ Does not include 121 cities previously recorded as having a planning commission but from which no replies were received in the survey.

⁹ As in Mercer County, N. J.; Los Angeles County, Calif.; Monroe County, N. Y.; St. Louis regional plan Missouri and Illinois, etc.

¹⁰ As in California, New York, Iowa, etc.

¹¹ See *Report of New York State Commission of Housing and Regional Planning*, May 7, 1926.

These and similar efforts in other States provided a background for a conference on land use called by the Secretary of Agriculture in November 1931, and resulted in the organization of a National Land Use Planning Committee.

Planning for public works by the States had also been discussed for many years before the efforts of the Federal Employment Stabilization Board to encourage formulation of State 6-year programs of public works gave definite impetus to this activity, since fostered by the National Resources Board.

State Planning Before 1933

In most States, State planning in one or more fields was practiced and accepted before 1933 as a natural or indeed inevitable activity of State government. In a few States the words "State planning" were utilized to describe this work.

The report of the New York State Commission of Housing and Regional Planning, dated May 7, 1926, is usually cited as the first State planning report in the comprehensive sense in which the term is now used. Perhaps it would be more accurate to give such precedence to Jefferson's Notes on Virginia (1784). At any rate, the New York report combined an inventory of the State's assets with an historical description of their use and of present trends.

In Wisconsin a Regional Planning Committee was established by act of the Legislature in 1931, and in Illinois, Massachusetts, and Iowa work was begun. The Illinois State planning work was first sponsored by the State Chamber of Commerce and a special State Planning Committee was created in 1931 by a joint legislative resolution. Another private organization (the Trustees of Public Reservations) was advancing State planning in Massachusetts, while in Iowa the State Conservation Commission inaugurated a State plan primarily in the conservation field.

What is Modern State Planning?

From what has already been outlined, the reader will doubtless gather that State planning is a very active movement—but what is it all about? The remaining parts of this volume supply an answer in two forms: First, there is a review of State planning work in each State, and, second, a topical review of the principal subjects or fields covered in State planning reports. A quick glance at the chapter headings in this topical review will give a general idea of the scope of State planning.

Briefly State planning consists of the systematic, continuous, far-sighted application of the best intelligence available, to programs and problems of State development and organization, in order to provide higher standards of living and greater security for the people of the State. Planning is the use of scientific

and technical skills, coupled with imagination, to determine and influence trends or changes which can be helpful to this larger purpose. The method of planning is:

First, surveys—to inventory our present natural and human resources.

Second, analysis—to determine current changes or trends which may be significant with a view to selecting critical or potential points which can be changed or influenced through concerted public action, and

Third, planning proper—to suggest measures, tools, new ways of doing things which may promote orderly development and fuller use of our resources.

The State Planning Boards in their first reports wisely emphasized the first two steps, seeking more information before making many recommendations. In gathering information they have sought to develop a spirit of cooperation with other State, Federal, and municipal agencies, and in so doing have recognized that coordination of separate planning enterprises is essential to the larger objective—a State plan.

Continuous State Planning

The most important objective of the State Planning Boards has been to survey the natural and human resources of the State, and to consider how they may be developed. To this end planning must be made realistic and of practical usefulness; the administrative relationships must be carefully built up; legislative programs and continuing financial arrangements for planning must be agreed upon. Neither the National Resources Committee nor any other Federal agency is seeking to impose any plan or planning procedure upon any State. Rather, it is hoped that the impetus supplied by national planning projects may develop sufficient interest in each State for the State to make its own plans within the framework of the national program.

Coordination of State Activities

Similarly it must be emphasized that the State Planning Board is organized not as an agency to intrude upon the functions of existing State departments, but as an agency to coordinate and harmonize the work of many public bodies.

For purposes of correlating plans and programs the State planning office is a natural center for the State departments. Its usefulness to those departments has been a main concern from the beginning. Through membership of department heads on the State Planning Board, through special committees instituted by the Board, and through constant contacts, a degree of mutual confidence and efficient working relationships have been built up. The whole structure of each State government was canvassed early in the work to determine the needed combinations and committees for effective work.

The same is true, although less important at first, with extra-governmental organizations within the State: Universities, research agencies, State chambers of commerce, historical societies, State sportsmen's organizations, and manufacturers' associations, all of which are utilized and encouraged to take an active part in planning work in cooperation with the State Planning Board.

State planning is an *advisory*, not an administrative activity. Experience in other planning work shows that in establishing the value of planning, adherence to a policy of advice without interference in administrative organization can be effective and useful.

Through the new experience gained in these planning projects, new methods have been developed for drawing together the soundest programs for the future and for correlating the work of many agencies in carrying out such plans.

State Planning Boards and consultants may draw on the wide variety of talents and techniques eligible to assist in the development of this State planning procedure. In brief, use has been made of men with the research type of mind in a variety of fields.

The Preliminary State Plan

The first goal of a State Planning Board is usually the preparation of a preliminary plan which may include (1) a program of public works for a considerable period, (2) a proposed transportation system, (3) a general classification of the area of the State into the principal recommended land uses, and (4) other studies and projects such as housing and Government reorganization, as may be indicated in each State.

Planning is a continuing activity. A good plan is never finished but must be constantly revised and amended to meet changing conditions and new needs. It follows, therefore, that work on the preliminary plan should be in a form which can be carried on with the least possible lost motion.

General Survey. In most States, the first step was to organize a survey for the collection and correlation of essential information bearing upon social, economic, and physical development. Emphasis was placed, in the first instance, upon material readily available and special information which was immediately needed such as (a) map material showing existing conditions, (b) surveys and studies which have been completed or are in progress by various public and private agencies, (c) public-works projects proposed for construction now, (d) proposals for future development.

The work was so organized and planned that it could be carried on continuously. A convenient arrangement is to secure the collaboration of the best reference library in the State in making up reference cards listing items of material, systematically obtained from the library catalog.

Research. A certain amount of original investigation and research may be necessary for the preparation of a preliminary plan. Efforts in this direction, however, were limited at first to ascertaining what researches and studies of direct value had already been made, and to adapting the results to the problems immediately involved in this stage of the work, including analysis and interpretation of trends and possibilities.

Following the collection of appropriate data as to what exists now, much of which was obtained gratis from official and unofficial voluntary agencies, the next job was to organize, evaluate, and make these data readily accessible so that it will be possible to know quickly what if any specific information is on hand for any area. The way is then clear for the formulation of an intelligent conception of probable future social, economic and physical development based on (a) study of present trends, (b) desires of the people in the area in question, as to future development and (c) its relation to existing conditions and future development of the region or State as a whole.

Fields of Work

Public Works Program. The State Planning Boards have been in a position to render aid to the State and Regional Public Works officials in formulating sound long-range public-works programs. Valuable assistance has been given on such matters as testing the Statewide, long-term value of proposed projects, reconciling conflicts of established policies and of the views of various interests, coordination of the activities of governmental agencies, elimination of duplication and in adjusting the distribution of projects to the need for work to relieve unemployment in various parts of the State.

Through special works committees, acting in cooperation with the State engineers of the Public Works Administration and the State relief administrator, inventories of available and needed public works were prepared by the State Planning Boards in January and February 1935. The resulting National Public Works inventory comprised returns and preliminary evaluation of 138,000 projects estimated to cost over 20,000,000,000 of dollars, which can be utilized as a basis for 10-year programs of public works in the several States and municipalities. In fact, many of the State Planning Boards have augmented and further analyzed the data produced by this inventory, the results of which they have incorporated into significant reports. A number of these include a tentatively proposed long-range public works program, while others confine their initial approach to setting up general groups of projects which should be undertaken or present a statement of principles or criteria to guide the formulation of a specific program. All the reports, however, bring

together and relate information, recommendations, and the results of studies which have been made by various agencies in the past as well as the present.

Land Planning. The State Planning Boards have collaborated with State colleges, Federal, State, and private agricultural, conservation, and experimental agencies in setting up a land-use study of the State to determine present uses and the most logical uses to which the land should be put, i. e., forest land, crop land (several types), pasture land, land for protection of watershed, and recreational land. Land planning committees of the State boards have brought together these interests and agencies to guide the work of the land planning consultants assigned from the National Resources Board. All of the State Planning Boards have thus made notable progress on the definition of "problem" or submarginal agricultural areas and in the examination of lands suitable for resettlement. Study has been given to the possibilities of "zoning" for the purpose of classifying and guiding the proper use of rural lands. Investigations have been made into the possibility under present laws of controlling land subdivisions in unincorporated areas. The same land committees have been utilized for determination of local desires in cases of misunderstanding or dispute on jurisdiction of different Federal agencies administering land areas.

Transportation. Of vital importance to the social and economic life of the State is the efficiency with which people and goods are transported by rail, highway, water, and air. A reexamination is needed of the adequacy of present facilities, their interdependence, location, and arrangement, and the conflicts between different methods of transport such as grade crossings, drawbridges, and tunnels. The State Planning Boards have studied our transportation system in relation to rural and urban development; power supply and transmission; probable distribution, growth and size of industrial areas; present and potential agricultural production; and to ports, terminals, and markets for distribution of goods. All methods of transport have been regarded as part of a single system, and to that end efforts have been made to work out a practical method of integrating the different units so as to use each method in its most efficient and economic form.

Housing. The numerous problems involved in new housing, slum clearance, and housing rehabilitation in many of our cities have focused attention upon the need for State assistance in the form of guidance, control, and encouragement as well as for establishment of sound, clear-cut policies. The whole question of improved housing conditions is intimately related to all the other phases of State planning and is very much before the public today. Consequently, the State Planning Boards were concerned almost immediately with housing problems in their relation to the State as a whole as

well as to individual community development. The boards can be of material assistance in formulating necessary housing legislation and also in organizing and conducting surveys of existing housing conditions throughout the State in cooperation with Federal, State, and local agencies.

Population and the Social Survey. In the last analysis the structure of State planning must rest on a fully developed comprehension of the population characteristics, the drifts and changes in population and the forces producing those drifts and changes, and upon the real needs of the people. Therefore, in every State planning enterprise an early start was made on a twofold survey to bring out the important factors, (1) a statistical geographic survey of the population, and (2) a social survey, with some field work, to get from the people and from those who come most closely in contact with the people, an understanding of their history, economic status, desires and needs, and attitudes. This is an almost virgin field for State planning, and it promises to be an extremely fruitful one.

Conservation of Natural Resources. One of the most profitable and effective ways to begin State planning is to study the State's natural resources in conjunction with the land-planning phase of the work and in their relation to the agricultural and manufacturing industries, to recreation, and to the economic status of the people. The wise utilization of native resources in a sense constitutes State planning, provided the economic and social factors are fully recognized. The State of Iowa has made a 25-year conservation plan. In this approach, as in most phases of State planning, the planning agency's function is in large part the stimulation and the coordination of the work of other State, Federal, university, and private groups.

Recreation. Recreation has been made a separate project in some States, but frequently it falls conveniently into planning for the wise use of the lands, forests, and waters. Several States have made considerable progress in the development of a State system of parks and reservations, while still others have undertaken the preparation of or have completed plans for such a system. The success with which Civilian Conservation Corps workers have been employed on carefully planned State parks and reservations projects, as compared with unplanned projects, has demonstrated the value of comprehensive plans for such development prepared in advance. An important element in the land-use planning has been the setting aside of appropriate areas for fishing and hunting reserves, wildlife preserves, parks of various types, primitive or wild areas, scenic areas and historic areas and monuments. Of fundamental importance is the proper location of recreational areas in relation to the distribution of the population which will use them as well as to the character and fertility of the land available.

Distribution of Industry. One of the most important elements of State planning is that which has to do with the movement of industry. How far should decentralization be encouraged, and what kind of industrial units are desirable? An examination of (1) the actual trends in industrial movement and (2) the possibilities for further industrial development have proven to be good starting points in this whole phase of State planning. Such studies bring to the surface the critical problems affecting the industrial structure, such as freight rates, raw materials, markets, power, and water supply. Universities have been frequently interested in making studies of this kind.

Water Resources. It is surprising to find that before the organization of the State Planning Boards the problems of power development, water supply, and sewage disposal were often in a chaotic situation, due to lack of any central board which could study this field and bring out the State-wide, coordinated planning for the economical and adequate provision of these essential facilities. In every State the planning for water resources needs to be dovetailed with other elements, such as land use and industrial development.

Fiscal Programming. Most of our States are struggling with unbalanced budgets and insufficient tax revenues. The programming of expenditures on the basis of prospective revenues from various sources and for various purposes may be a particularly useful service. Special attention has been given to a program in which certain public works projects are held back for periods of low prices and unemployment.

Governmental Reorganization. In some situations the time is ripe to push such matters as consolidation of counties, of park districts, and of other taxing bodies. There is political difficulty in this type of project, and a State planning agency may be more free to work on it than the other established administrative units. Again, universities are frequently interested in this kind of planning.

A full-fledged State planning project will eventually include all of these items and others as well. Formulation of sound conservation and development policies will require the intelligent coordination of the various activities and plans of public and private agencies through adequate organization and exercise of constant foresight and judgment.

Committee Organization—State Planning Boards

To handle these special studies many of the State Planning Boards have set up committees, usually under the chairmanship of a member of the board, but including representatives of cooperating agencies and interested citizens. A long list of active committees is provided by the State Planning Board of Oregon, which has special groups studying agriculture, land

classification, forestry, mineral resources, water resources, power, fisheries, transportation, commerce and industry, education, public welfare, wildlife, recreation and maps, basic data and statistics.

Another example of such committees is provided by the Arkansas State Planning Board where committees on highways, rail and water transportation, land use, water resources and rural electrification, public works and unemployment, parks and recreation, tourist attractions, public schools, State penal institutions, capitol grounds, public lands and county boundaries, centennial parks and statistical and research projects.

Still other boards have added to these subjects, public health, taxation, metropolitan problems, etc., in the case of Virginia, a total of 19 committees have been organized.

Another type of committee organization has been set up by the New England Regional Planning Commission, where an advisory group of over 500 members has been appointed to consult with the State and regional planning agencies to provide contacts with public opinion throughout the area.

Membership on State Planning Boards

The membership of State Planning Boards varies from 5 in the Idaho Board to 22 in the State of New York. Two theories of organization are discernible—one combining officials and citizen members and the other utilizing only nonofficial citizens—but in both cases supplementing the Board membership with numerous committees and special groups including other qualified persons to advise on special problems. In no case, so far as now known, have members been paid for their services on the State Planning Boards.

The ex-officio members of State Planning Boards have often included the Governor himself as active, as well as nominal, chairman. Other officials named by the laws or appointed by the Governors have included the heads of Public Works Departments, State highway officials, health officers, chiefs of public welfare and educational departments. Forest and conservation officials have often been included.

The value of having these officials as members of the board has been shown in the increasing interest they have taken in the coordination of their work with that of other departments. Since they are the officials who are entrusted with the execution of plans, it is important that they should fully understand the purposes behind planning proposals, so that later interpretations of intention and inevitable changes in detail can be made in the spirit of the original plan. The ex-officio members of State Planning Boards have not only participated fully in the work, but in many cases have made available funds and personnel to carry on investigations and planning research. Since the pur-

pose of State Planning Boards is to correlate and coordinate planning proposals rather than to duplicate the work normally assigned to existing State agencies, the cooperation of State officials, whether or not they are members of the board, is essential to the success of the undertaking.

Among the citizen members, prominence has been given to officials of the universities.¹² This contact with the State or other university has been most helpful in making available sources of information and research men for the use of the State Planning Boards. Other citizen members of the planning boards have been drawn from a great variety of occupations and interests with no one profession or business particularly prominent. The new American Society of Planning Officials provides an opportunity for exchange of experience among planners.

Staff of State Planning Boards and Appropriations

A nucleus staff for the State Planning Boards has been provided in most States through contingent funds available to the Governors or through loan of services from other State departments and bureaus. More recently, with the appropriation of State funds to carry on the work of the newly established statutory boards, a director of planning and drafting and stenographic assistants have been paid for out of these regular State appropriations. Practically all of the State Planning Boards now have some such nucleus staff supplemented by special assistance from cooperative State agencies, universities, and private institutions.

By far, the larger part of the funds and staff for State planning work have been supplied during the last 2 years through the emergency organizations from the Civil Works Administration, the Federal Emergency Relief Administration, and the Works Progress Administration. By giving work to engineers, draftsmen, statisticians and others of the white-collar class in their own or related fields, these planning projects have constituted a valuable contribution not only to the planning movement but also to the restoration of morale among this valuable class of unemployed workers.

The funds so far appropriated by State legislatures are below the sums previously available to the boards from emergency funds, but the appropriations already made are most encouraging evidence of the value placed on State planning work by the legislatures.

State Planning Consultants

The State planning consultants and associate consultants assigned by the National Resources Board to State planning agencies have provided a working rela-

tion for the cooperative development of Federal and State planning policies. They are in effect ambassadors of planning between the two jurisdictions.

The National Resources Board has of necessity due to the nature of the work, left the consultants with but few instructions. They have had to adapt themselves to the conditions and situations in which the State Planning Boards found themselves, in starting a new venture. Different subjects or activities were opportune or important in different States. Differing degrees of supervision and leadership were required to get the work started and continued.

One requirement only has been made of these consultants—a full report to the Washington office at stated intervals. It is from these reports that the progress of the State planning movement can be measured.

The reports of consultants¹³ vary in volume and in content not only according to the State and its special problem, but also according to the varied background and interests from which the consultants were drawn. While a majority of the men now assigned as consultants had had previous consulting experience in city and regional planning work, the list¹⁴ includes also two men who were secretaries of State chambers of commerce, a social service executive, a number of civil engineers and landscape architects, and other with training as architects, economists, and newspaper men. The special experience and interests of each consultant are naturally reflected in his report.

Federal Assistance to State Planning

The National Planning Board of the Public Works Administration, set up in July 1933, recognized the strength of local interest, initiative, and responsibility in planning and the need for local participation in the formulation of planning policies. If city planning, regional or metropolitan planning are requirements for a well-governed city, and if a national planning agency is appropriate in the Federal Government, it logically follows that State planning organizations might not only be useful for the States, but also provide necessary contacts between the Federal planning agency and public opinion in the States. This possibility was called to the attention of the Governors of all of the States by a circular letter of the National Planning Board early in December 1933, and almost immediately resulted in the appointment of a large number of State planning boards. The suggestion from the National Planning Board was not only well received, it was seized upon in a manner indicating that the need and possibilities of such an agency were fully recognized

¹² Alabama, Arizona, Iowa, Minnesota, Missouri, New York, Ohio, and Utah.

¹³ Cf. List of consultants, appendix p. 291.

¹⁴ Cf. Bibliography p. 294.

in many States. Support and cooperation were forthcoming without regard to political affiliations of the Governors, and most of the boards were set up on a strictly nonpartisan basis.

At the same time that the National Planning Board suggested the organization of State Planning Boards, the Public Works Administration allotted funds for the employment of consultants to be assigned by the Board to qualified State planning agencies. As conditions precedent to such assignments the Board requested assurances from the Governor of each State concerning the following points:¹⁵

1. Appointment by the Governor of an unpaid State Planning Board, including perhaps four department heads, such as public works, highways, conservation, and health, together with three citizens.

2. Assurance by the Governor that if this State Planning Board gets under way he will sponsor some legislation to put it on a continuing basis.

3. The assignment from existing State offices or application to the Civil Works Administration for drafting and stenographic help to carry on the work of the proposed board.

4. Development of a planning program, giving the status of planning work already done and outlining specific studies to be undertaken in, say, the next 6 months. The suggestion that this program include a land-use study, a 10-year program of public works, and perhaps a study for the integration of the transportation system within the State.

5. Any suggestions the Governor or the new board may wish to make of a qualified planner to direct the work.

6. Statement of the Governor's willingness to appoint the planner, or the chairman of the State Planning Board, as the State representative on a Regional or Inter-State Planning Committee, if such committee is organized.

Help for State Planning Boards was also forthcoming from the Civil Works Administration which was just getting started at that time. Administrator Hopkins gave planning projects sponsored by official State and city agencies a preferred status for employment of so-called "white collar" workers. Similar help has been continued through the Emergency Relief Administration.

The financial contribution from Federal funds through the assignment of consultants by the Board has amounted to something over \$270,000 for the period from December 15, 1933, to June 15, 1935. The funds expended for assistance to State Planning Boards through the Civil Works Administration and the Emergency Relief Administration cannot be accurately stated because of the manner in which these accounts were combined with other projects and

because of the contributory or sharing basis as between State and Federal agencies which varied from State to State.

Suggestions for Work and Organization

Through the consultants and a series of meetings in different parts of the country and through circular letters distributed from the office of the Executive Officer in Washington, the National Planning Board and its successor, the National Resources Board, have been able to suggest appropriate fields of activity, methods of work, and types of organization for State Planning Boards.

Additional suggestions were sent out in later circulars and bulletins prepared by the executive officer and assistant executive officer, and transmitted through conferences in New England, Chicago, Knoxville, Baltimore, St. Louis, and Cincinnati.¹⁶ Opportunities for cooperation by State Planning Boards on submarginal land purchases, transfers of land jurisdictions, the Public Works Administration inventory of available public works, real property, and other inventories have been called to the attention of State boards and consultants.

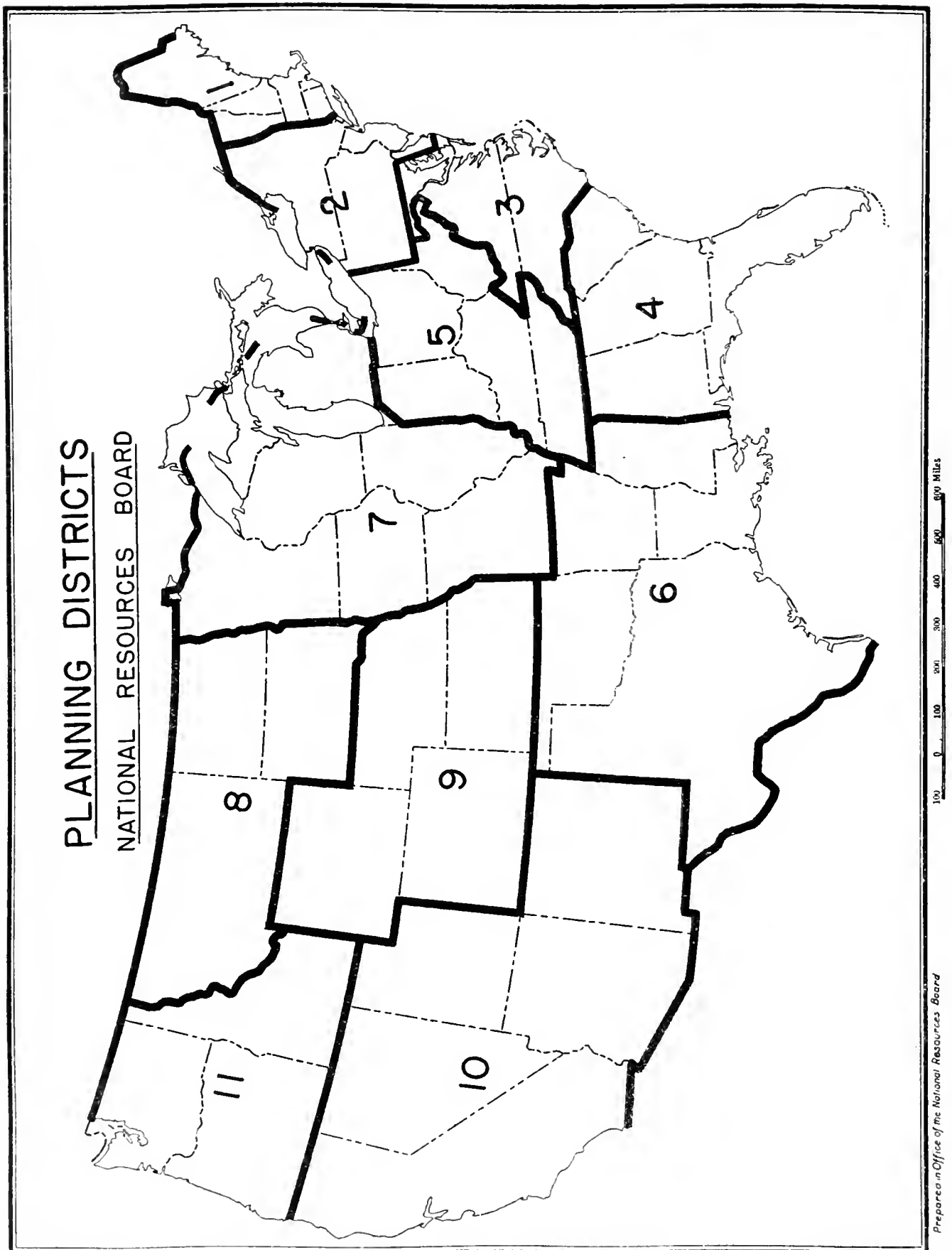
Regional Advisers and District Chairmen

Regional advisers of the Public Works Administration, acting as the field representatives of the National Planning Board, played an important part in bringing these suggestions and offers of assistance to the attention of Governors and leading citizens who were interested in the possibilities of State planning for their States. They pursued widely different methods according to the local situations which they found and were especially helpful in relating the work of the State engineers of the Federal Emergency Administration of Public Works to the activities and interest of the planning boards set up as strictly autonomous and independent State agencies. Following is a list of the former regional advisers with the States in their regions:

Regional adviser	Region
George W. Lane.....	No. 1. Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut.
Edward J. Flynn.....	No. 2. New York, New Jersey, Pennsylvania.
Charles M. Moderwell..	No. 3. Ohio, Illinois, Indiana, Michigan, Wisconsin.
Frank W. Murphy....	No. 4. North Dakota, South Dakota, Nebraska, Minnesota, Iowa, Wyoming.
Marshall N. Dana.....	No. 5. Washington, Oregon, Montana, Idaho.
Justus S. Wardell....	No. 6. California, Nevada, Utah, Arizona.

¹⁵ See fifth circular letter of National Planning Board, Dec. 11, 1933.

¹⁶ For list of circulars and circular letters see appendix p. 306.



Regional adviser	Region
Clifford B. Jones-----	No. 7. New Mexico, Texas, Louisiana.
Vincent M. Miles-----	No. 8. Colorado, Kansas, Missouri, Oklahoma, Arkansas.
Henry T. McIntosh-----	No. 9. Mississippi, Alabama, Georgia, South Carolina, Florida.
George L. Radcliffe-----	No. 10. West Virginia, Maryland, Delaware, Virginia, Kentucky, Tennessee, North Carolina.

Upon the dissolution of the P. W. A. State Advisory Boards and the offices of regional advisers, a new set-up of district chairmen for the National Planning Board was appointed, in some cases continuing the former regional advisers but with different districts or regions. The district chairmen of the National Resources Board are now (June 15, 1935):

District chairmen	District
Victor M. Cutter-----	No. 1. Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island. No. 2. New York, New Jersey, Pennsylvania, Delaware. No. 3. Maryland, Virginia, North Carolina.
Henry T. McIntosh---	No. 4. South Carolina, Georgia, Alabama, Florida.
Alfred Bettman-----	No. 5. Ohio, Indiana, Kentucky, West Virginia, Tennessee.
Vincent M. Miles-----	No. 6. Arkansas, Louisiana, Mississippi, Oklahoma, Texas.
Charles M. Moderwell--	No. 7. Illinois, Wisconsin, Michigan, Minnesota, Iowa, Missouri. No. 8. Montana, North Dakota, South Dakota. No. 9. Wyoming, Nebraska, Colorado, Kansas. No. 10. New Mexico, California, Arizona, Nevada, Utah.
Marshall N. Dana-----	No. 11. Washington, Oregon, Idaho.

Some of the district chairmen of the Board have found it desirable to organize semiofficial planning agencies for the interstate region that they serve—others have found personal meetings with the State planning boards or groups or committees on special subjects to be effective in promoting cooperation and common understanding.

Regional adviser, now United States Senator, George Radcliffe organized an advisory committee¹⁷ which met frequently and to the great advantage of planning in his region. This group of volunteers was particularly active in connection with the proposed Shenandoah-Great Smoky Parkway and with pollution problems in Chesapeake Bay. While serving as a member of this advisory committee Col. J. M. S. Waring developed the industrial studies since carried on under his direction in the Emergency Relief Administration.

In the Pacific Northwest, Marshall N. Dana, as regional adviser and district chairman, organized the Pacific-Northwest Regional Planning Commission with representatives from each of the State planning boards in the district. Two largely attended regional conferences under the auspices of the Regional Planning Commission have demonstrated the vitality of the work under his direction.

A similar New England Regional Planning Commission in the opposite corner of the United States was organized under Regional Adviser George W. Lane and continued under Victor M. Cutter as district chairman, with the vigorous support of the New England Council. Both of these regional planning organizations have been assisted by assignment of consultants and other personnel from the National Resources Board.

The mention of these regional organizations does not mean that the district chairmen in other parts of the country have been less active—on the contrary, it reflects the different methods which were wisely adopted and adapted to suit different situations.

Present Status of State Planning

Public acceptance of the idea and need for continuing State planning work has been shown by the passage of many bills to establish State planning agencies on a permanent basis. As already noted legislative authority for State planning work existed only in Wisconsin, Illinois, and the District of Columbia prior to the issuance of the State planning circular of the National Planning Board. A bill was then pending in the Maryland Legislature and was soon passed, to be followed by a resolution of the Virginia Assembly and acts in Washington, Kentucky, Montana, and New Jersey, before the legislative sessions of 1934 had adjourned.

To assist in the drafting of bills for State planning work the National Planning Board circulated the "model" laws prepared by the Harvard Graduate School of City Planning and sent out copies of all laws as they were approved. No effort was made to encourage uniformity in powers, organization, or statements of duties of State Planning Boards because the National Resources Board recognized the experimental character of this work and the necessity of adjusting legal forms to the special situations in different States. The laws passed in 1934, were, however, important factors in the framing of bills for submission to 1935 sessions of State Legislatures.

During the last few months, when the legislatures of a vast majority of the States were in session, a long series of bills was introduced and pushed toward passage by the State Planning Boards. With the support of the Governors and in almost every case as a non-partisan measure, an unusual number of these bills

¹⁷ Dr. Thomas S. Cullen, Thomas W. Rogan, Theodore E. Straus, William Gordon Beecher, John E. Semmes, Abel W. Luman, W. Watters Pagon, Talbot Todd, Horace E. Flack.

were favorably received and passed. Today, June 15, 1935, 30 States have State Planning Boards set up by special legislative acts and in two States the work is proceeding under authority of special resolutions. In 13 other States the planning boards have been continued under the general authority of the Governor to set up advisory committees and similar agencies. With these varying degrees of permanence and authority, State Planning Boards are now functioning in all the States of the Union excepting only Delaware and Louisiana.

Whereas there were only 2 or 3 boards or commissions in the country which could properly be called State planning organizations when the National Planning Board first offered assistance to qualified State planning agencies, there are now, in June 1935, State Planning Boards appointed by Governors of 45 States, the District of Columbia, and the Territory of Alaska. In the brief period of less than 2 years (almost entirely since January 1935) 30 States and Alaska have passed laws establishing these State Planning Boards on a continuing basis. The District of Columbia has had a legally established National Capital Park and Planning Commission since 1926.

State planning has fired the imagination of large numbers of people without regard to party, class, or section. Support for State planning work has been enthusiastically given by persons from all parties, with the assistance of chambers of commerce, labor organizations, farm groups, and a wide variety of other interests. Republican and Democratic Governors alike have appointed State planning agencies to plan for the future of their respective States. In all parts of the country Governors are urging continued development of State planning work.¹⁸

From New England, where Gov. John G. Winant set up the first State planning board, his successor, Governor Bridges, reported in his inaugural message, referring to the work of the planning boards, said, "Two major political parties are committed to the principle of continuing its function. It is directly concerned with State development, not only with recreational but with industrial and agricultural lines." At the other end of the country, Governor Blood, of Utah, remarks that "Planning for the best economic development of the State is a very important function of the Government."

At a meeting of the Kansas State Planning Board in January, Governor Landon pointed out that "the State Planning Board being in close touch with Federal and State Departments can perform effective services for both especially in coordinarng the varied phases of

the relief program." Governor Johnson, of Colorado, has stated that through the State planning agency "we expect to determine all the basic facts which must underlie intelligent development of our natural resources and to establish a coordinated, intelligent, and well-considered program of public improvements. We want to get away from the hit-or-miss methods of the past, and to see that each highway project or other public works ties into the whole scheme for the development of Colorado."

In submitting the State planning report to the legislature, Governor Lehman of New York, commended it to the "thoughtful consideration not only of the members of the legislature but also of the people of the State * * * This will give to our people a comprehensive, coordinative review of the physical resources of New York State and the relation of these resources to our economic and social well-being." Governor Peery of Virginia has pointed out that "planning is necessary to any well-ordered and successful individual. It is likewise necessary in government, and, but for planning by the founders of our Republic we would doubtless be deprived of the proud boast that ours is the best of all governments in the world."

Governor McNutt of Indiana summarizes the purpose of the Indiana State Planning Board in the statement that the fundamental objective of a State plan is the provision for the healthful, convenient, pleasant living conditions in situations affording abundant opportunity for the proper utilization of the talents and ability of all individuals in a manner profitable to each.

Future State Planning Work

Politics seem to have played little or no part in the choice of Planning Board members and, in general, planning has been placed as much outside the range of ordinary politics as has education. It has been generally recognized that planning requires the cooperation of a wide variety of different interests in the States and that to be successful it must be technical rather than political.

The review of reports and topics studied by State Planning Boards outlines a broad field of future work for these new agencies. They are still young and their work is necessarily largely experimental, but their many accomplishments, even under the difficult circumstances of the last 2 years, augur well for their future. They can do much to coordinate planning activities in State departments, to fill in gaps, and to make both citizens and officials study and work for the more effective use of the human and natural resources of each State.

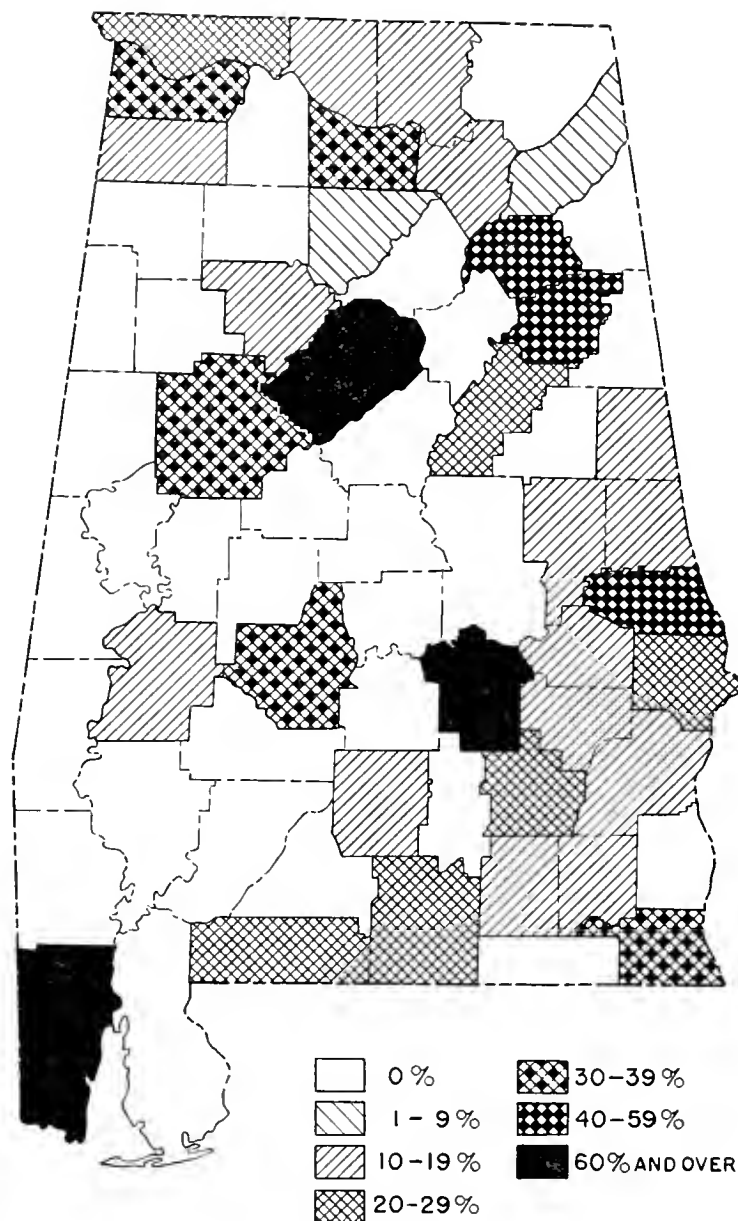
¹⁸ See Circular No. IV, dated Feb. 12, 1935, of the National Resources Committee.

PART II

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ALABAMA
STATE PLANNING BOARD
1935
PERCENTAGE OF URBAN POPULATION BY COUNTIES

MILES
0 10 20 30 40 50

ALABAMA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 27, 1934

Organization and Staff

On January 27, 1934, former Gov. B. M. Miller, in response to the offer of cooperation from the National Planning Board, appointed the Alabama State Planning Board, which has been continued by Governor Graves. Members are: Dr. L. N. Duncan, chairman, Alabama Polytechnic Institute, Auburn; Col. Page S. Bunker, State forester, Montgomery; Dr. Walter B. Jones, State geologist, University of Alabama; Dr. A. F. Harman, State superintendent of education, Montgomery; Frederick I. Thompson, publisher, Montgomery; Mayer W. Aldridge, Montgomery; Milton H. Fies, Birmingham; J. N. Baker, State health officer, Montgomery. Membership on the board is without financial compensation. Several meetings have been held and projects for surveys of the State's resources studied.

On August 1, 1934, Paul S. Haley was assigned as land planning consultant to Alabama by the National Resources Board. On February 19, 1935, he was succeeded by Luther Fuller whose office is located in quarters furnished by the Alabama Polytechnic Institute. This institution, together with the Agricultural Extension Service, has furnished office help and supplies, while clerical help has been furnished by the Alabama Emergency Relief Administration. Excellent cooperation in securing data and making surveys has been received from various State agencies.

Background and Citizen Support

The thinking people of this State have long felt the need of a well-worked-out plan for the best utilization and conservation of the State's natural, economic, social, and industrial resources. The development of electric power at Muscle Shoals and on other rivers has brought popular realization of the abundance of the State's water-power resources. The need of conservation of iron and coal in the northern part of the State has long been felt and the great waste in the forest areas of south Alabama is apparent to all who pass through that section. Equally serious is the fact that much of the State's agricultural resources have been depleted by serious soil erosion, mismanagement, and absentee ownership. Good progress has been made in the development of a more constructive type of agriculture in the past few years, but there is much to be done through a well-laid-out State-wide plan of conservation and

BILL TO BE INTRODUCED IN NEXT LEGISLATURE

utilization. County planning boards have been organized in a number of counties in the State, and from these the board is getting support and encouragement.

Duties and Functions

A bill has been prepared by the State planning board for presentation to the legislature, creating a permanent planning organization. The function of this board, as outlined in the bill, will be:

"To study the problems of the State and seek to develop a planned economy and development of all the natural, agricultural, mineral, industrial, social, and human resources of the State of Alabama for the social and economic development and progress of its people; to coordinate and integrate all plans to the end that the highest public interest may be served; that the * * * resources of the State may be so protected and so utilized that present and future citizens of the State shall be the constant beneficiaries of the State's natural endowments. In the performance of this function, the board shall review and correlate the policies and plans of State departments and governmental agencies; initiate and conduct inquiries, investigations, surveys, studies, and research to obtain necessary facts and data; assemble and analyze this data, and therefrom make determinations and recommendations and formulate policies and plans for the development and utilization of all resources * * *; propose and coordinate plans for public improvements and governmental policies relating to the execution thereof; confer and cooperate with State, Federal, and regional agencies, and with the executive, legislative, and planning authorities of neighboring States, and of the counties, municipalities, and other governmental agencies of this and other States for the purpose of bringing about * * * coordination * * *."

Funds and Appropriations

Under the present organization of the State planning board, which was created by appointment of the Governor and not by act of the legislature, no funds were provided. However, it is anticipated that the legislature will favorably consider a bill providing sufficient funds. The Alabama Relief Administration approved a project for acquiring a land-ownership map of each county and has paid all of the expenses in furnishing materials and men to do the work.

ACCOMPLISHMENTS AND RECOMMENDATIONS

1. In September 1934 a land use schedule calling for information relating to the agricultural, social, and economic conditions of Alabama was compiled by the county agricultural agents for the use of the board. From the information furnished, valuable data have been secured for planning a better utilization of the State's agricultural resources.

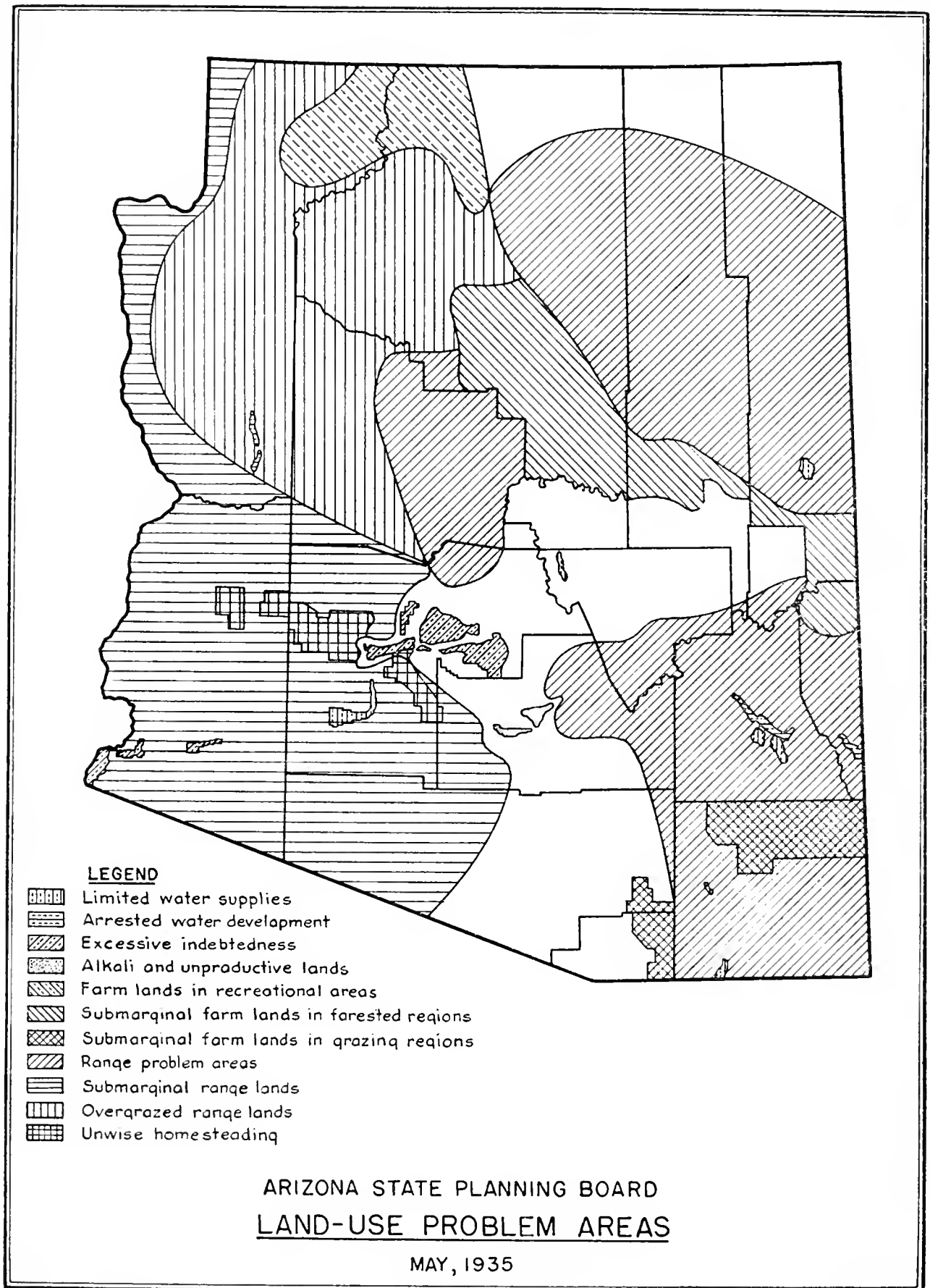
2. Land ownership maps are being prepared.

3. A classification of types of farms and predominant agricultural problems has been completed.

4. Four submarginal land projects, ranging from 50,000 to 150,000 acres have been approved, this land to be converted into forest and game preserves.

5. An inventory of Public Works projects, in cooperation with the State P. W. A. engineer, was taken.

The board has not as yet made enough progress in its studies to draw definite conclusions as to State-wide plans. One of the outstanding needs of Alabama, however, is a more effective method of correcting and controlling soil erosion, which is considered one of the greatest menaces to the State. It is felt that some plan should be evolved whereby the proper terracing equipment could be made available to the land owners upon a credit basis.



Redrawn from map prepared by land planning consultant.

ARIZONA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 23, 1934

Organization and Staff

In response to suggestions by the National Planning Board, Gov. B. B. Moeur on January 23, 1934, appointed the Arizona State Planning Board. The members are: Dr. Homer L. Shantz (member of the national land use planning committee from 1931 to 1934), president, University of Arizona, chairman; Howard S. Reed, State engineer, Public Works Administration, secretary; Arthur N. Kelley, secretary, board of directors of State institutions; Dr. George C. Truman, State superintendent of public health; T. S. O'Connell, State highway engineer; William G. Hartman, chairman of the Phoenix City Planning and Zoning Commission, and of the Maricopa County Planning Board; Chas. P. Mullen, State land commissioner; R. O. Barrett, Federal Housing Administration; W. W. Lane, consulting engineer, Phoenix; Dr. I. E. Huffman, and Mrs. J. W. Ross, Tucson. The National Resources Board has been requested to assign a State planning consultant in addition to two land planning consultants, Wm. A. Steenberger and G. E. P. Smith. The Arizona section of the American Society of Civil Engineers is generously cooperating with the board and has submitted two valuable reports on flood control and a power survey of the State.

Background and Citizen Support

A number of the members of the board are heads of State departments, and have an intimate knowledge of the needs of Arizona.

The board has at all times received the hearty support of the citizenship of the State, which apparently shares the board's enthusiastic interest in long-range

WILL AGAIN SUBMIT BILL TO LEGISLATURE

planning for the best utilization of the State's natural resources.

Duties and Functions

On March 5, 1935, a bill was introduced in the senate of the Arizona State legislature, entitled "An Act to promote more economical and orderly development of the State through the creation of an unpaid State planning commission." It was passed by the senate but failed in the house. The Governor is interested in the bill, however, and has indicated his willingness to present it at the next session of the State legislature. The duties of the planning commission as outlined in the bill are to prepare and perfect a State master plan showing existing and proposed State parks, forests, parkways, public reservations, highways, sites for public buildings, airways and air terminals, and other pertinent features. The commission is to cooperate with municipal planning boards for the purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the State; to furnish information and suggestions to county and city governments and planning boards; to investigate defective housing, the evils resulting therefrom, and the work being done elsewhere in the State to remedy them.

Funds and Appropriations

The Arizona State Planning Board has at no time had any funds of its own, and all work has been accomplished through the cooperation of the various departments of the State of Arizona, the University of Arizona, the Arizona section of the American Society of Civil Engineers, and the Public Works Administration through the office of the State engineer.

ACCOMPLISHMENTS AND RECOMMENDATIONS

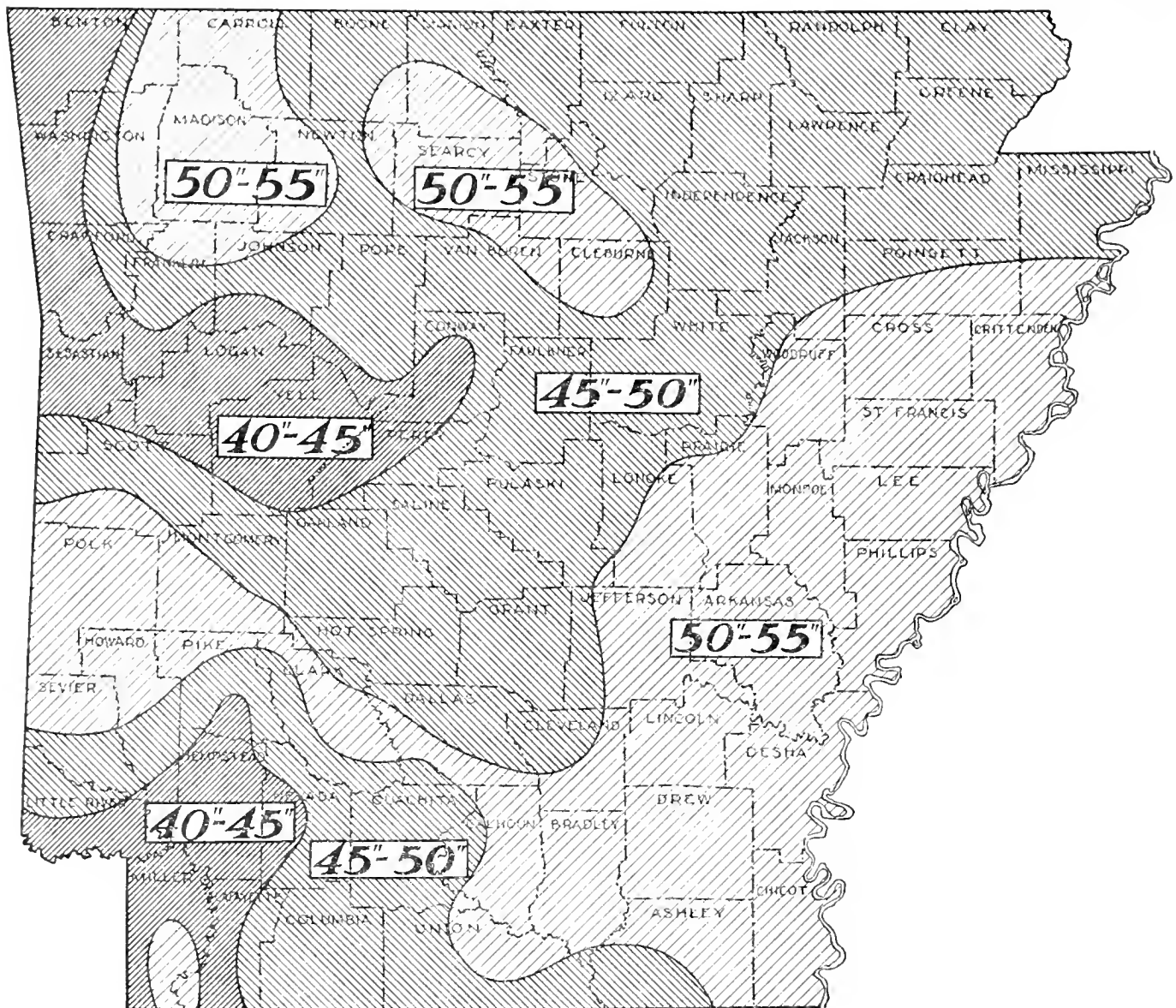
Although the planning board has been financially unable to publish reports, some very valuable information has been assembled in the hope that publication will later be possible. By advisory participation in the work of the administrative agencies affecting the development of the State, the board intends to work out a comprehensive, long-range plan in the general interest.

Comprehensive reports are on file under the following titles: Flood Control and Water Resources; Power Survey of the State of Arizona; Transportation System Survey and Report; Governmental Reorganization of State and Local Government; New Game Management Policy for America; Recreational Areas and Wild Life; Importance of Upland Game Birds in the Southwest; Report on Wild Life Conference of the Arizona Game Protective Association; Coconino-Sitgreaves Winter Game Range; Game Range, San Pedro River Valley; Proposed Game Preserves in Western Arizona; Recreational Facilities of Pima County; City Recreation Planning; Forest, Parks, and Recreational Areas; Recreational Report on Parks Lake, Graham County;

Wild Life and Recreational Purposes, State of Arizona; Employment of Leisure Time; Gila River Bottoms; Soil Erosion and Water Conservation Program (Santa Cruz); Report on Industries—Proposed Cotton Textile Mill; Proposed Twine Factory (using native Yucca fiber); Land Use and Land Use Problem Areas in Arizona; Land Use Adjustment Report, State of Arizona; Location and Description for Settlement and Closer Settlement.

Some of the additional accomplishments of the planning board are: Recommendation to the National Resources Board for appointment of a Colorado River Authority; public-works inventory as outlined by the National Resources Board and the Public Works Administration (in this work the board has had the support of county planning boards and individuals throughout the State); organization of county planning boards, appointments being made by the board of supervisors. These are of great assistance to the State planning board.

The State of Arizona is becoming, beyond any doubt, conscious of the desirability of public planning.



STATE OF ARKANSAS

AVERAGE ANNUAL RAINFALL

FROM RECORDS OF U.S. WEATHER
BUREAU AT LITTLE ROCK 1891-1930

LEGEND

	FORTY TO FORTY-FIVE INCHES
	FORTY-FIVE TO FIFTY INCHES
	FIFTY TO FIFTY-FIVE INCHES

STATE PLANNING BOARD

From "State Planning for Arkansas—Second Report", March 1935

ARKANSAS

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 22, 1934

Organization and Staff

Arkansas was one of the first States to join in the Nation-wide movement for organized State planning as suggested by the National Planning Board through the regional advisers of the Public Works Administration. An unofficial planning board consisting of 13 members was appointed by Gov. J. M. Futrell on January 22, 1934.

A comprehensive State planning bill was introduced in the 1935 State legislature and 18 days later, on February 4, 1935, was signed by the governor. The official State planning board, organized on April 26, 1935, consists of 15 members, including Governor Futrell as ex-officio chairman; ex-Gov. George W. Donaghey, chairman; George C. Branner, State geologist, vice chairman; Roy W. Spence, secretary of the highway commission, secretary; Carl E. Bailey, chairman State park commission; M. Z. Bair, State sanitary engineer; J. O. E. Beck; T. J. Gaughan; Charles A. Gillet, State forester; Dan T. Gray, dean of the college of agriculture; J. N. Heiskell; Judge C. P. Newton, member State corporations commission; W. E. Phipps, State commissioner of education; F. W. Scott, and Walter B. Sorrells. Earl O. Mills of St. Louis was assigned as consultant and Dean W. Blackburn as land-planning consultant by the National Resources Board. Guy B. Smith was named coordinating supervisor of the technical staff.

Background and Citizen Support

State planning as it is known today did not exist in Arkansas prior to 1933, largely due to the fact that 80 percent of the population lives in rural areas. Some evidence of physical, economic, and social

LAW ENACTED FEBRUARY 4, 1935 (ACT NO. 9)

departmental planning was, however, apparent. The first act to provide for the improvement of highways was passed in 1911 by the general assembly, which in 1923 created the State park commission. City planning is now being stimulated by the Arkansas Municipal League in cooperation with the State board.

Duties and Functions

The official State planning enabling act provides that: "It shall be the function and duty of the State planning board to prepare and adopt an official State plan * * * which shall be made for the general purpose of guiding and accomplishing a coordinated, adjusted, efficient, and economic development of the State * * * in accordance with present and future needs and resources. The board shall advise and cooperate with municipal, county, regional, and other local planning commissions. The board shall also prepare and keep up to date a long-term coordinated program of public improvement projects * * * and shall prepare and submit to the Governor and general assembly a comprehensive public-works program for the State."

Funds and Appropriations

Personnel and financial support for the planning work has come largely from the State relief administration, which has provided a staff of nine employees and approximately \$1,500 per month. Offices are in the Capitol Building.

The last session of the legislature provided a small biennial appropriation of \$10,000, available July 1, 1935.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The planning board has assumed that its primary function is that of a coordinating agency. Insofar as possible, each State department is being encouraged to develop its own plans in collaboration with the State planning board. Early investigations disclosed that a number of splendid and useful studies had previously been prepared by several State departments, the University of Arkansas and the State relief administration.

During the first 6 months, the board prepared a comprehensive survey of the characteristics and resources of the State.

In order to explain the purpose of State planning to the people of Arkansas, a State planning conference was held at Little Rock, July 10-11, 1934, at the end of the first 6-months period of the board's operation. United States Senator Joe T. Robinson gave a stirring speech on the subject of the opportunities for Arkansas under the Federal program.

The following 6 months it evaluated the factual data and prepared preliminary recommendations on the comprehensive planning program. Eleven advisory

committees were appointed to assist in the studies listed.

The more recent achievements of the board, in addition to securing the passage of planning legislation, and a law to permit the blocking-up of tax delinquent lands, include the following preliminary studies made in cooperation with the appropriate State agencies: (1) Comprehensive plan for rural land use and sub-marginal areas; (2) State highway plan; (3) State park plan; (4) comprehensive plan for game preserves; (5) program for water conservation, flood control, and stream pollution; (6) suggested policy for the encouragement of industrial development within the State; (7) program for the development of a State public library system; (8) State-wide public works inventory, resulting in applications for 3,627 P. W. A. projects amounting to \$338,000,000.

The planning board hopes to undertake a detailed land-use study. A contemplated population study when completed will serve as an index of changing conditions and will be the basis for estimating population distribution in the year 1960.

CALIFORNIA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 17, 1934

Organization and Staff

The State planning board of California was appointed by the late Governor Rolph on January 17, 1934, in response to the offer of cooperation and assistance by the National Planning Board. Members of the board are: John C. Austin, architect, Los Angeles, chairman; Vincent S. Brown, San Francisco, secretary; Archbishop Edward J. Hanna, chairman State housing and immigration committee, San Francisco; Harry A. Hopkins, chairman State highway commission, Taft; Earl Lee Kelly, director department of public works, Redding; Dr. Junius B. Harris, State board of health, Sacramento; Joseph Mesmer, Huntington Park; William J. Fox, chief engineer, regional planning commission, Los Angeles; Mrs. Edmund N. Brown, State park commission, San Francisco; Prof. B. M. Woods, University of California, Berkeley; and Gordon Whitnall, Los Angeles.

In June 1934 L. Deming Tilton was assigned as consultant by the National Planning Board, and in July Adolph DeFremery, Philip J. Webster, and David Weeks were assigned by the National Resources Board as land-planning consultants.

Actual work on a State plan for California began in October 1934. Headquarters for the Board were established in Los Angeles, with a staff of one planning technician and a secretary-stenographer supplied by the State and two full-time supervisors. Approximately 50 relief workers were supplied by the F. E. R. A. In March 1935 State funds were exhausted, and the two full-time workers were dropped. One additional supervisor, however, was supplied by the Relief Administration.

Background and Citizen Support

The State-wide conservation movement, begun in California many years ago under the leadership of

LAW ENACTED JUNE 14, 1935 (CH. 331)

United States Senator Hiram Johnson, prepared the way for effective State planning. The division of water resources has attacked the complex and difficult problem of developing a comprehensive long-time plan for the conservation and utilization of the water resources so necessary to the State's welfare. The State railroad commission has a State-wide program of grade separations, and the State park commission, with \$6,000,000 provided by a bond issue in 1928, is carrying out the purchase of land for a comprehensive park plan, designed by Frederick Law Olmsted.

Local planning in California has also developed extensively, and there are now 27 county and numerous city planning commissions in existence.

Duties and Functions

The original State planning bill provided for a permanent board whose powers and duties were outlined in the manner suggested by the Harvard "model State planning act." The amended bill, as enacted by the legislature June 14, 1935, states that "the board shall have authority to cooperate with any persons or organizations interested, for devising means to develop the natural and economic resources of the State * * *."

Funds and Appropriations

Funds to support State planning have been supplied mainly by the Federal Government and the State.

The division of highways allocated \$5,000 for office rent, equipment, supplies, and the employment of essential personnel. The largest amount of funds for planning was provided by the Emergency Relief Administration. The average monthly pay roll of the work-relief staff and supervisors has been approximately \$3,000.

The State planning act provides for no appropriation. Responsible State officials, however, have assured the board of adequate support.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The State planning board has not had the opportunity to make impressive accomplishments. Its limited facilities have been used largely for research.

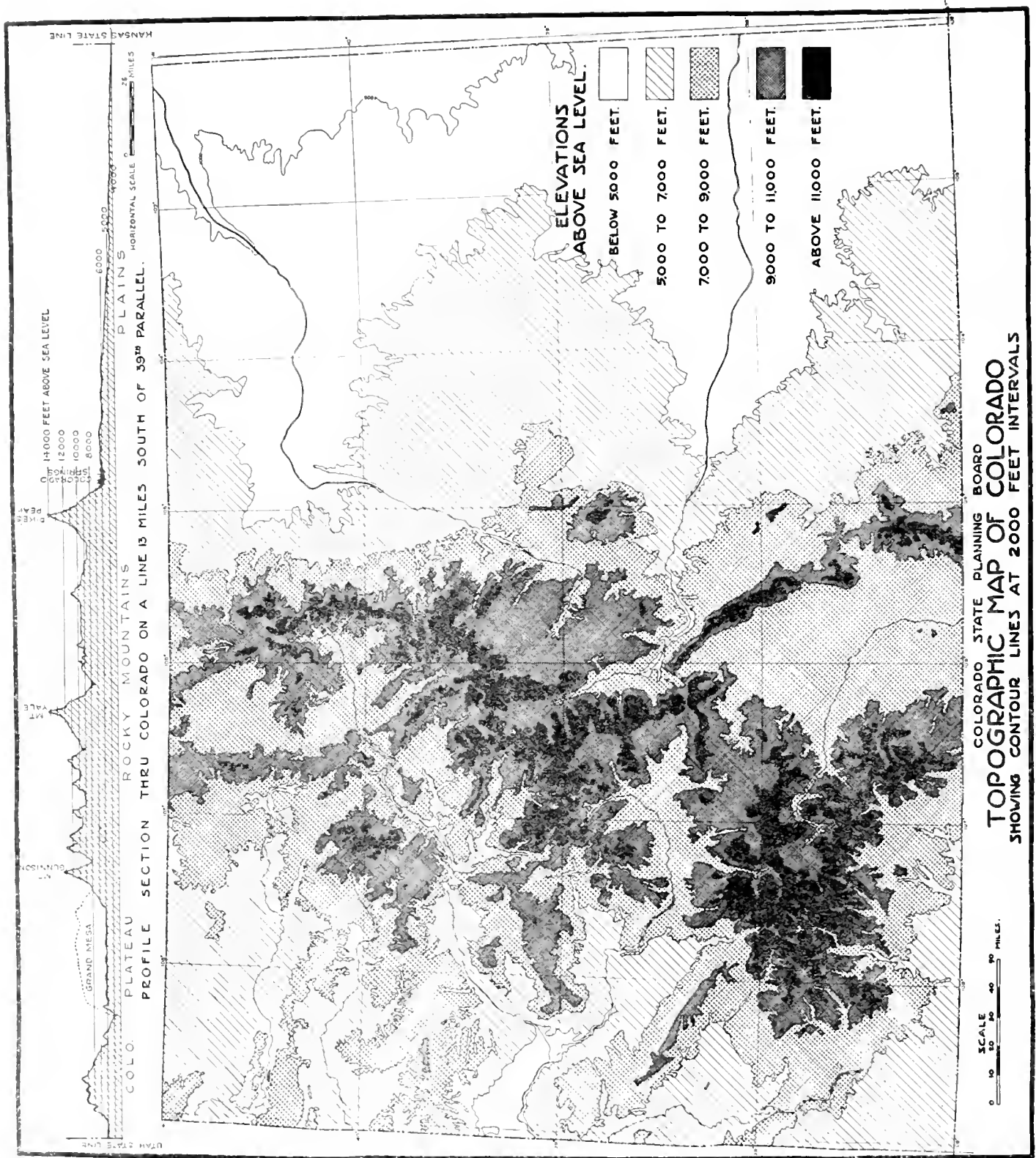
The staff has produced a quantity of maps, charts, and other useful material to serve as bases for planning. The board has prepared a report of its more significant findings, but shortage of funds has so far delayed publication.

Since February 1935, the staff has been engaged in classifying and analyzing the projects listed in the recent Public Works inventory.

The board was consulted recently in several matters relating to public land use, rural rehabilitation, and the purchase of submarginal areas. It has made a report

concerning problems of overlapping jurisdictions in large forest, grazing, and wildlife areas in the north-eastern counties, and it has aided in special economic studies of the Central Valley water project and the use of the water of Lake Tahoe. These projects have been referred to the board by agencies of the Federal Government.

The State planning board believes that, if it is to prove its ability and justify confidence in its recommendations, it must be free from sectionalism, political influences, and narrow prejudices; it must remain aware of modern social and economic trends, and avoid making the board a promotional agency for doubtful causes.



COLORADO

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 15, 1934

Organization and Staff

The Colorado State Planning Board was appointed by Gov. Edwin C. Johnson on January 15, 1934, in response to the offer of assistance by the National Planning Board, and under authority of a joint resolution of the general assembly in 1933. The members of the board are: John T. Barnett, chairman; Edward D. Foster, secretary, station immigration commissioner; Dr. F. A. Anderson, extension director, Colorado Agricultural College; J. A. Clay, president; M. F. Coolbaugh, Colorado School of Mines; Robert K. Fuller; H. C. Gowdy; M. C. Hinderlider, State engineer; E. B. Johnson; C. M. Lightburn, president Denver Planning Commission; Col. Allen S. Peek, United States district forester, and Dr. Elmore Petersen, extension director, University of Colorado. This board is continuing to serve until the permanent State planning commission, authorized by the legislature in 1935, is appointed. The National Planning Board assigned Irvin J. McCrary as consultant; R. K. Fuller, associate consultant and later, J. C. Foster, land planning consultant were assigned by the National Resources Board. A staff of engineers, draftsmen, and office assistants was provided by the State emergency relief administration.

Background and Citizen Support

Except for the work of the Denver City Planning Commission, there has been little continuous local planning in Colorado. However, zoning ordinances have been adopted in the larger cities and urban zoning has been upheld in the courts. Looking toward State planning, the legislature in 1933 authorized the Governor to appoint a committee of citizens to study the subject and report their findings at the next legislative session. Popular support for State planning has grown rapidly in recent months. Educators, technical or-

LAW ENACTED FEBRUARY 8, 1935 (CH. 212)

ganizations, and the press have voiced their recognition of the need for comprehensive planning and their approval of the creation of a State planning authority.

Duties and Functions

The State planning act passed by the legislature and signed by the Governor February 8, 1935, merged the board of immigration with the State planning board and transferred the former's personnel, equipment, and functions to the new agency. The law provides that the State planning board shall prepare, and perfect from time to time, a master plan for the coordinated development of the State. The board has authority to promote public interest in State planning, and may cooperate with the Federal Government, other States, and local authorities in effecting coordinated development. Its duties include the drafting of necessary legislation for the master plan. State authorities are required to submit their proposals for land acquisition and construction projects to the planning board for consideration and advice.

Funds and Appropriations

As the State planning board was established between regular legislative sessions, no specific appropriation was available for operating expenses. The Governor arranged for office space and equipment, incidental expenses, and some office assistance through regular State departments. The State emergency relief administration provided an office staff and field workers.

For the biennial period commencing July 1, 1935, an appropriation of \$31,500 has been made for the State planning board, a considerable part of which will be required for activities such as cooperative crop-reporting service, inherited by the planning board from the former board of immigration. An additional appropriation of \$10,000, dependent upon excess revenue from the sales tax, may not materialize.

ACCOMPLISHMENTS AND RECOMMENDATIONS

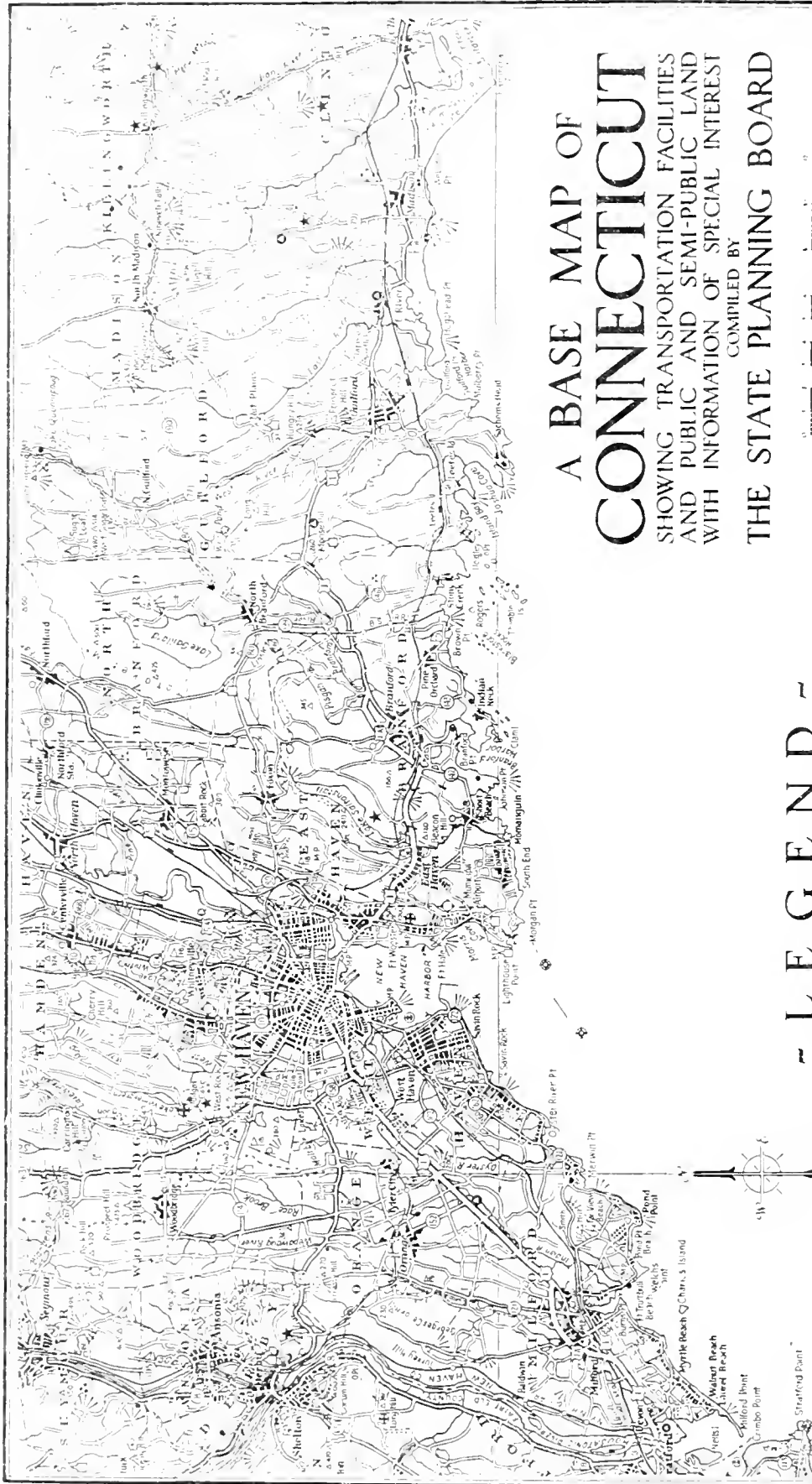
The State planning board first assembled essential data. This included surveys of the physical characteristics of the State, its resources in land, water, minerals, and recreational attractions. Historical data on transportation and population trends also were obtained.

The board has exchanged information with, and aided in coordinating the work of, governmental agencies in charge of relief, rural rehabilitation, land planning, and public works. Submarginal land-purchase projects have been recommended after the completion of a survey of the submarginal areas of the State. A State-wide land ownership survey is expected to furnish valuable data for land planning.

The prime importance of water conservation to Colorado is apparent. While total water production is ample, natural distribution does not answer needs

for domestic and irrigation uses in the individual river basins. The board is preparing a plan for water development, to include transmountain diversions and supplementary storage facilities. Minor construction projects for increasing the efficiency of irrigation systems have been carefully canvassed. An investigation of stream pollution, together with a study of water-borne diseases, has been conducted jointly with the State board of health.

The planning board cooperated with the P. W. A. State engineer in making an inventory of public-works projects. The revival of metal mining in the State promises increased employment. In the hope of furthering the technique of exploration and encouraging new mining activity, extensive geological surveys in the mineralized districts have been recommended.



A BASE MAP OF CONNECTICUT

SHOWING TRANSPORTATION FACILITIES
AND PUBLIC AND SEMI-PUBLIC LAND
WITH INFORMATION OF SPECIAL INTEREST

COMPILED BY
THE STATE PLANNING BOARD

SCALE IN MILES

- 1934 -

(This section from the complete Map)

County Line
Town Line (Township)
State Line
Hospital (General)
NEW HAVEN (City of 102,000, 302,000)
NEW BRITAIN (City & Town of 50,000, 100,000)
MIDDLETOWN (City & Town of 25,000, 50,000)
NORWICH (City & Town of 10,000, 25,000)
Orange (City & Town of 1,000, 10,000)
Middletown (City & Town of 1,000, 10,000)

LEGEND

The information covered by the following symbols has been compiled from data available in the various Departments of the State and from a Survey of Places of Scenic and Historic Interest made by the Planning Board under the Supervision of Mr. Edgar L. Heermann.

Airports	(Land)	Coast	State Game Sanctuary	5365
Emergency Landing Field	Coast	State Traveled Shading Ground	536	
Emergency Beacon	Coast	Rivers & Streams	Coast	
Lighthouse	Coast	(Fishing & Hunting under Regulations in State Forests)	Coast	
Landmark	Coast	Historic Bldgs. & Sites	Coast	
Scenic Place	Coast	Indian History	Coast	
Summit of Hill (height in feet)	Coast	Old Mines & Quarries	Coast	
Observation Tower (See Note)	Coast	Canal (Old Northampton)	Coast	
State Forest	Coast	Geological Interest	Coast	
Fireplaces (in State Forest)	Coast	Bathing Beach (State Operated)	Coast	
Picnic Areas	Coast	Yacht Club House	Coast	
State Park	Coast	Golf Course (Number of Holes)	Coast	
Municipal Park	Coast			
Other Federal, State & County Land	Coast			

Main Through Roads	4 Lane Road	2 Lane Road
Grand Connecting Roads		
Other Roads		
Scenic Road		
Trails		
Road Number (U.S. Highway)		
Distance in Miles		
Gradients (up & down)		
Ferry		
Station		
Passenger Train		
Freight Train		

CONNECTICUT STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED DECEMBER 1933

Organization and Staff

In December 1933, following the offer of cooperation from the National Planning Board, Governor Cross appointed the Connecticut State Planning Board, comprised of the following members: Dr. William L. Slate, director, Connecticut Agricultural Experiment Station, New Haven; Gen. Sanford H. Wadham, State water commissioner, Hartford; John A. Macdonald, State highway commissioner, Hartford; Daniel S. Sanford, chairman, Fairfield County Planning Association, Hartford; Joseph W. Alsop, State public utilities commissioner, Hartford; and Allen W. Manchester. The board organized and elected Dr. William L. Slate chairman. The board, with the exception of Mr. Manchester (resigned in June 1934) continued to function until April 30, 1935, when it resigned after the general assembly passed an act creating a State planning board. George H. Gray, who was appointed State planning consultant by the National Planning Board, served the State board until December 1934. Since then Dr. C. G. Chakerian has been the director.

The law was approved by Governor Cross on April 18, 1935, and subsequently he appointed the following members of the board: Dr. William L. Slate, chairman; Joseph W. Alsop; Austin F. Hawes; Brig. Gen. William F. Ladd; John A. Macdonald; John J. Egan, Connecticut Federation of Labor, Bridgeport; Prof. Maurice R. Davie, Yale University, New Haven; Edward Ingraham, manufacturer, Bristol; Dr. Stanley Osborn, State health commission, Hartford.

The services of project supervisors, research workers, draftsmen, and clerical workers were secured through the Connecticut Emergency Relief Commission, and office space provided in the State Office Building. In November 1934 the research work of the emergency relief commission was coordinated with the social and economic research program of the State board.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Under the direction of the board, the following specific projects were accomplished:

(1) An aerial map of the entire State at a scale of 1:14,400, made through efforts of cooperating State agencies. The map, the first complete record of land use in Connecticut, is an initial step in revising the topographic map of the State. The scale of the map permits enlarging any portion of it for tax assessment purposes, or reducing any part of it for soil and forest surveys and other uses.

(2) A composite map of the State, showing highways, parks, forests, hunting and fishing areas, golf courses, walking trails, camping areas, bathing beaches, aviation fields, public institutions, and places of scenic and historic interest.

(3) A garbage and household-waste disposal survey, made in cooperation with the State water commission, in every municipality with a population of 2,000 or more.

LAW ENACTED BY LEGISLATURE APRIL 18, 1935

Background and Citizen Support

Planning efforts in Connecticut, prior to the appointment of the State planning board in December 1933, had been largely confined to city and town planning commissions. State departments responsible for the development of parks, forests, and highways had well-conceived plans and programs. No coordinating agency, however, existed to direct their efforts toward a balanced plan for the entire State.

Duties and Functions

Governor Cross in his instructions to the planning board, in December 1933, stated that the board could render a valuable service by undertaking such activities as the making of air maps, collecting additional information concerning the pollution of streams, and assembling all other useful planning data.

The board, however, was definitely instructed not to interest itself in State building programs since the State board of finance and control was responsible for these improvements.

Under the law passed in April 1935, it is the duty of the board to (1) collect information concerning the State's natural resources, its people, its industries, and other matters of public interest; (2) correlate the results of the research of State departments and other organizations; (3) conduct studies in which counties, towns, and municipalities are interested, and advise such units in connection with local planning problems; (4) formulate plans for advancing the wise use of the resources of the State and assist in carrying out such plans.

Funds and Appropriations

The expenses of the temporary State planning board were defrayed by the emergency relief commission. The legislature appropriated \$10,000 for the board's expenses for 2 years ending June 30, 1937.

(4) A survey of the location and potential uses of rural electrification lines, proposed by the Department of Agriculture, was made in one county in cooperation with the public utilities commission.

(5) A preliminary study of industrial trends in the State covers (a) the sources of the wealth and income of the State, and the occupational distribution of the gainfully employed; (b) trends in manufacturing and mechanical industries; (c) trends in the economic conditions of wage earners.

(6) A report on the evolution of the Connecticut settlement laws.

(7) A systematic examination was made of the watersheds of all principal streams.

The projects now under way include studies of ground water, drainage areas, transportation, recreation, population trends, metropolitan trends, relief and economic trends, and the preparation of a base map showing highways and waterways.

FLORIDA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED DECEMBER 2, 1933

Organization and Staff

The first Florida State Planning Board, consisting of five members, was appointed on December 2, 1933. In April 1934, the State planning board and the Governor's advisory council on unemployment relief were consolidated into the State advisory and planning board. The name was later changed to Florida State Planning Board and offices were established in Tallahassee. Members of the board are: C. B. Treadway, chairman; Fred C. Elliot, vice chairman; Edward Ball; E. G. Baxter; A. B. Dooley; Mrs. M. M. Ebert; Wendell C. Heaton; Judge John Viney; D. M. Lowry; Mrs. Meade A. Love; C. H. Overman; C. H. Reeder; Dr. Wilmon Newell; Lorenzo A. Wilson; Judge Robert T. Dewell; U. W. Cunningham; J. E. Hardee; George C. Willings; E. D. Lambright; Mrs. T. V. Moore, and Julius F. Stone, Jr. M. L. Montgomery has served the board as executive secretary since its organization.

Phil F. Kennard was assigned as Consultant by the National Resources Board and served until April 14, 1935. Colin D. Gunn and John B. Wallace were assigned Land Planning Consultants and placed in charge of Land Program Projects. In December 1934, L. T. Neiland was assigned as Land Planning Consultant.

Background and Citizen Support

Prior to the formation of the State planning board planning in Florida was primarily a local concern. Much experience was gained during the 1925 real-estate boom which stimulated keen public interest in city planning and zoning.

County planning councils and numerous municipal planning boards are now being organized.

The University of Florida and various State departments and private organizations have cooperated in the work of the board, and general public interest has greatly increased.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The State planning board has made comprehensive surveys of the highway system of the State, the public-school system, and the taxation and governmental structure. Initial surveys have been made of public health, public welfare, parks and playgrounds, and rural problems. A State-wide land-use survey has resulted in two preliminary reports.

With the assistance of the State road department and the F. E. R. A., 20,000 miles of county roads and 6,000 miles of State roads were inspected, and data regarding type, right-of-way, structure, and maintenance were collected and compiled.

A legal and statistical survey of the State's tax structure was made, and a public-building survey completed.

A survey of State-owned public institutions has been made, and the crowded conditions and inadequacy of the various plants are clearly indicated.

LAW ENACTED JUNE 10, 1935

Duties and Functions

The State planning act of early June 1935, states that the board's general duties are "to secure, assemble, study, map, plat, and chart any and all data which may pertain to the governance, rehabilitation, welfare, health, transportation, commerce, marketing, finance, business, population, land use, sanitation, waterways, communication systems, power development, mineral resources, parks, wildlife, public buildings, and property; and laws relating to social, economic, or conservation matters of the State of Florida, its political subdivisions and its people, for the purpose of advising and assisting, proposing, and recommending to State administrative officers, the State legislature, and the people of the State of Florida, plans for the future development, welfare, and governance of the State, in order that the State's plan of development may be coordinated, its economic resources be conserved, and the welfare of its people be promoted." The act also provides for close cooperation and assistance from the State departments in drawing up a State master plan based upon the foregoing activities and upon local plans prepared by county planning councils, which the board is authorized to create. The board is also authorized to cooperate with Federal agencies and with other regional or State planning boards.

Funds and Appropriations

Since the State planning board was appointed between sessions of the State legislature there were no funds available for its operation. An appropriation made by the preceding legislature for the study of tax problems was used to assist the planning board.

The Florida Emergency Relief Administration assisted the board in projects requiring clerical and technical personnel. Various State departments, particularly the State road department, have contributed toward the work. In the Planning Board Act of 1935, \$50,000 was appropriated for the next biennium.

Prior to and during the first 2 weeks of the legislative session, the board made the following recommendations:

1. Legal and constitutional revisions for the purpose of unifying the tax structure of the States, and of simplifying methods of administration.

2. Preparation of a comprehensive report on transportation, including 10-year aviation and highway programs.

3. Remedies for the land-tax-delinquency problem and legislation for better use of land.

4. Measures for control of the water resources of the State.

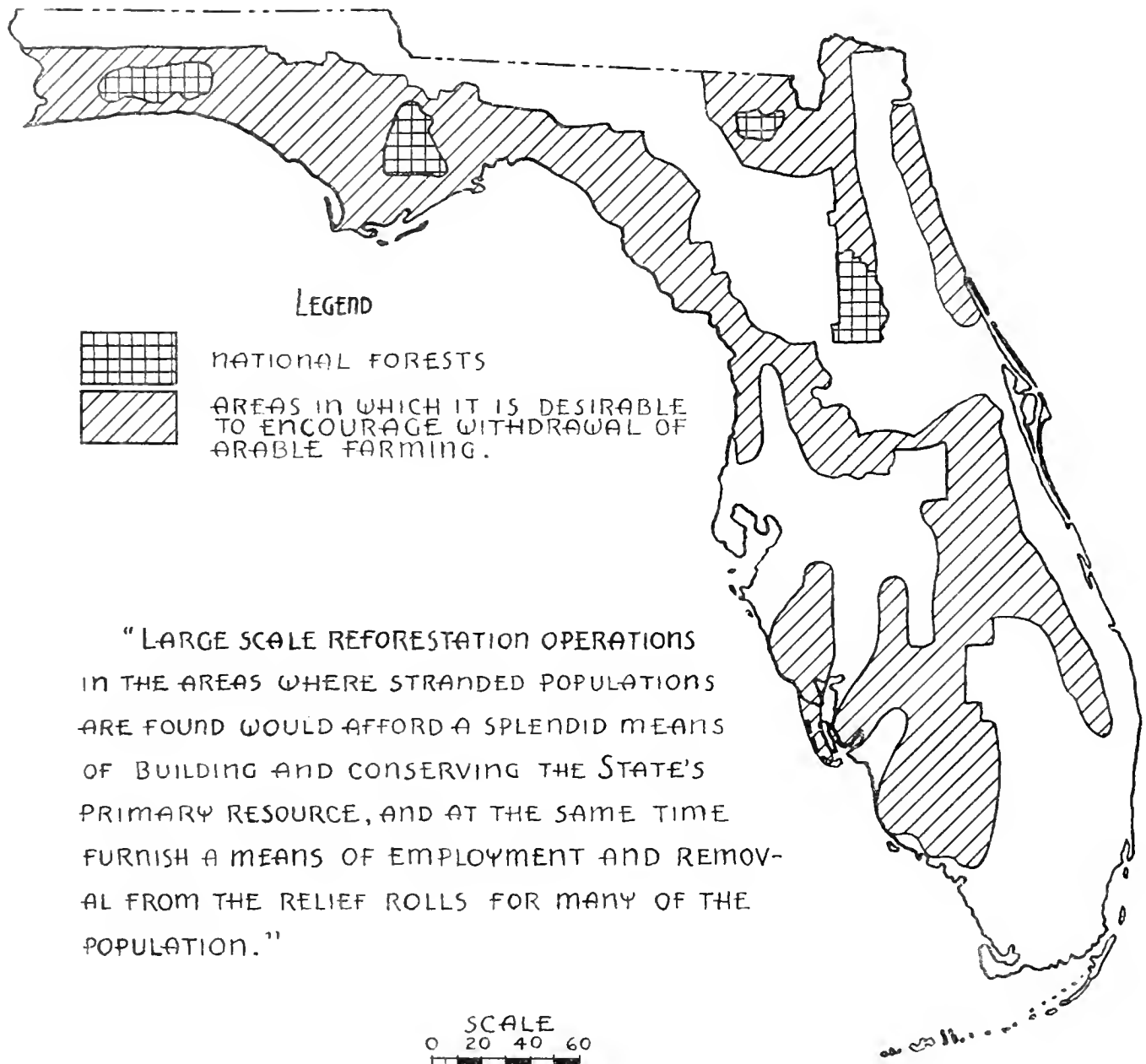
5. A plan of State public works, contemplating an expenditure of \$4,500,000 immediately and of \$20,000,000 over a period of 10 years.

6. A new State and county plan of efficient and economical school administration.

NATIONAL FORESTS AND POSSIBLE AREAS FOR REFORESTATION

FLORIDA STATE PLANNING BOARD

1935



From report by land planning consultants, "Land Problems and Conditions", January 1935.

GEORGIA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 26, 1934

Organization and Staff

In response to the National Planning Board's offer of cooperation, Governor Eugene Talmadge on January 26, 1934 designated the board of regents of the University System as the Georgia State Planning Board. The members of the board were as follows: Philip Weltner, Atlanta, university chancellor, chairman; Marion Smith, Atlanta; Cason J. Gallaway, La Grange; William J. Verseen, Moultrie; George C. Woodruff, Columbus; S. H. Morgan, Guyton; W. Elliot Dunwoody, Jr., Macon; E. S. Ault, Cedartown; Judge M. D. Dickerson, Douglas; Sandy Beaver, Gainesville; R. P. Burson, Monroe; Governor Talmadge, ex-officio, Atlanta. This board was practically inoperative.

In January 1935, Governor Talmadge abolished the Georgia State Planning Board and on April 8, 1935, appointed a new board consisting of: W. C. Wilburn, chairman of the State highway board, Atlanta; Tom Linder, commissioner of agriculture, Atlanta; M. J. Yoemans, attorney general, Atlanta; George B. Hamilton, State treasurer, Atlanta. The Governor himself serves as ex-officio member.

In order to obtain needed information for its land report due December 1, 1934, the National Resources Board appointed Beauregard A. Russell as land planning consultant for Georgia.

NO LEGISLATION

Background and Citizen Support

A constitutional amendment in 1927 authorized the State legislature to give authority to local planning boards and commissions. Although a general act to effectuate this amendment was passed by the legislature, little has been accomplished due to the belief of many lawyers that a special act for each city is required by the basic law.

The cities of Athens, Augusta, and Elberton have citizen groups interested in city planning. The Garden Club of Georgia, of which Mrs. Thomas Hubbard McHatton is president, has also displayed sympathy with city planning and landscaping.

In August 1932 the board of regents of the University System, led by Chancellor Philip Weltner, initiated a factual study of the 36 Georgia counties in the section known as the "Lower Piedmont." Out of this study, a subsistence homestead project was later developed.

In the Coastal Plain area, studies were made preparatory to the development of areas for livestock production. Other studies were later initiated in cooperation with the United States Soil Erosion Service.

Duties and Functions

In his executive order of April 8, 1935, Governor Talmadge restricted the duties of the present State planning board to cooperation with local and State agencies for the purpose of preparing public works projects for application to the Federal Government.

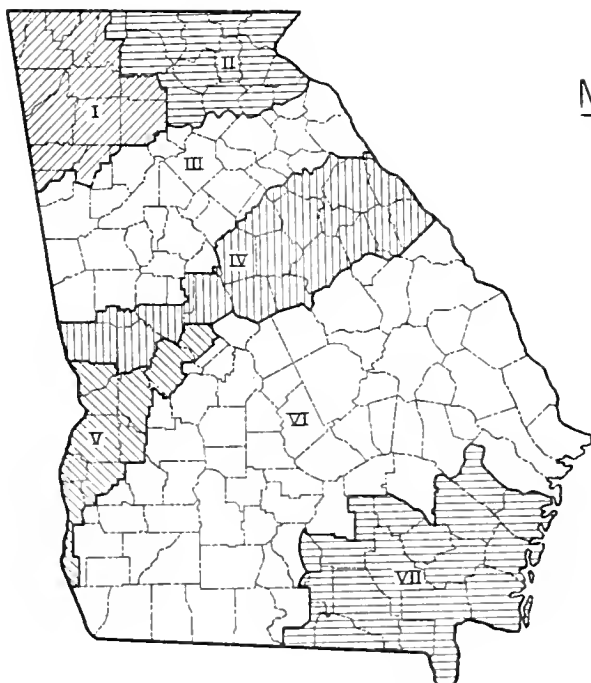
MAJOR AGRICULTURAL AREAS

LEGEND

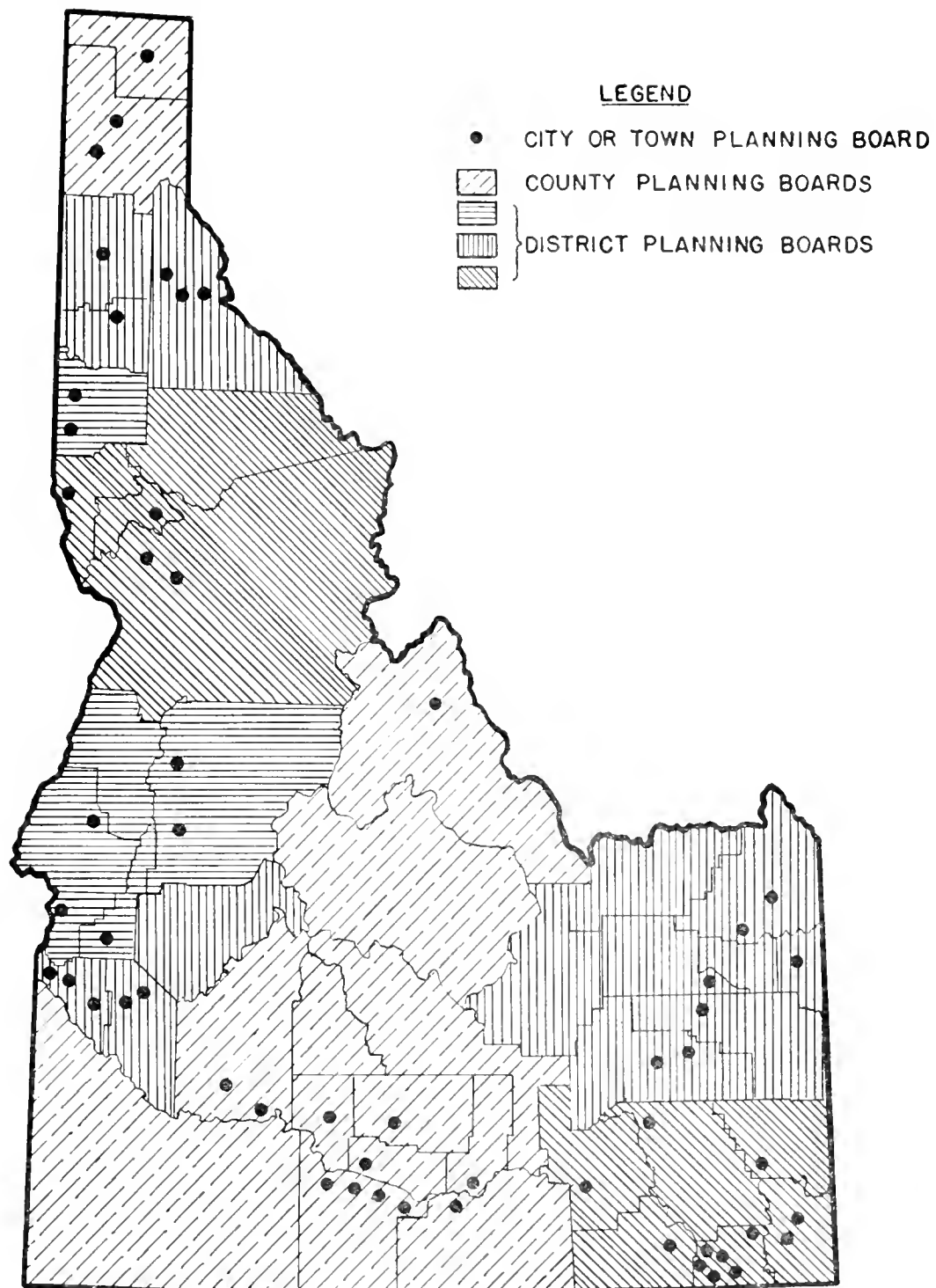
- I - VALLEY AND RIDGE BELT
- II - BLUE RIDGE FOOTHILLS
- III - UPPER PIEDMONT
- IV - LOWER PIEDMONT
- V - CHATTAHOOCHEE RIVER AND FALL LINE SAND HILLS
- VI - COASTAL PLAIN
- VII - COASTAL FLATWOODS

SCALE STATUTE MILES
0 10 20 30 40 50

DATA FROM REPORT-"NOTES ON CHARACTER
OF PROBLEMS AND POSSIBLE ADJUSTMENTS
IN RURAL LAND USE-GEORGIA"



Redrawn from report by land planning consultant, "Character of Problems and Possible Adjustments in Rural Land Use."



IDAHO
STATE PLANNING BOARD
ORGANIZED PLANNING UNITS

IDAHO

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED DECEMBER 22, 1933

Organization and Staff

Complying with the suggestion of the National Planning Board, Gov. C. Ben Ross in December 1933, appointed the Idaho State Planning Board with membership as follows: Eugene A. Cox, attorney, chairman; G. E. McKelvey, commissioner of public works, vice chairman; Robert W. Faris, commissioner of reclamation; Robert Coulter, land commissioner; Lewis Williams, commissioner of public welfare; F. C. Hummel, architect, and Dan J. Cavanagh, engineer-contractor. An advisory technical committee also was organized, consisting of representatives of universities, State departments, and professional groups. The National Planning Board assigned J. D. Wood as consultant (also serving as executive secretary). Later the National Resources Board assigned Harold A. Vogel as land planning consultant.

Chairman Cox also serves as a member of the Pacific Northwest Regional Planning Commission under the leadership of Marshall N. Dana, district chairman and Idaho thus participates in the study and planning for the whole Columbia Basin.

Background and Citizen Support

No precedent for organized planning exists in Idaho, a State of vast public domain, rugged topography, immeasurable, undeveloped natural resources and sparse population. Planning activity in Idaho, previous to 1933, was primarily concerned with settlement and reclamation policies, and with the Federal and State areas, which represent a large part of the State's territory. Evidence of popular support of the State planning board's objectives is seen in the fact that 100 per-

LAW ENACTED IN 1935 (CH. 8)

cent of the counties and 76 percent of the cities and towns recently have organized planning boards, and that the Idaho legislature has enacted comprehensive laws in support of State and local planning.

Duties and Functions

As outlined in the State Planning Act of 1935, the board is an agency for investigation, research, coordination, and administration of plans designed for the utilization of the social, economic, and physical resources of the State. These properly include land, water, minerals, facilities for power, transportation, communications, health, recreation, education, and other social needs. It is required to prepare and submit to the Governor and the legislature comprehensive programs and information from time to time, and to act as a special investigation board at the request of the Governor or the legislature.

It is a cooperating and coordinating board for all other agencies, local and regional, within the State, and is to cooperate with like commissions of other States and regions, as well as with Federal agencies.

Funds and Appropriations

Prior to March 19, 1935, the State emergency relief administration furnished most of the personnel and equipment needed. The State agricultural experiment station contributed \$2,000, and limited drafting and stenographic help; office space and supplies were furnished by State departments.

In March 1935 the legislature appropriated \$25,000 for the biennium for the State planning board, and \$50,000 for the water conservation board, a part of which fund will also be used for planning.

ACCOMPLISHMENTS AND RECOMMENDATIONS

As previously stated, many county and city planning boards have been created as a result of the board's activities. In fact, this organizing work is the chief accomplishment of the board to date. The complete planning organization of counties, districts, and State as developed in Idaho is believed to be the first case on record. In addition the following achievements may be listed:

Idaho has become a member of the Pacific Northwest Regional Planning Commission;

A submarginal land purchase and resettlement project was planned and is now under way;

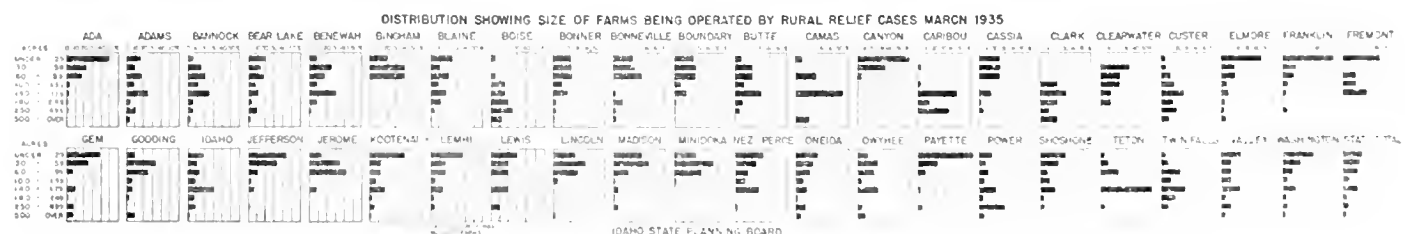
A progress report was completed on December 18, 1934, listing the land, water and mineral resources of the State, describing the transportation system, status of irrigation and power, of industries and public finance and taxation;

Land use planning is being rapidly developed;

A land classification project has been partially completed in 23 of the 44 counties of the State;

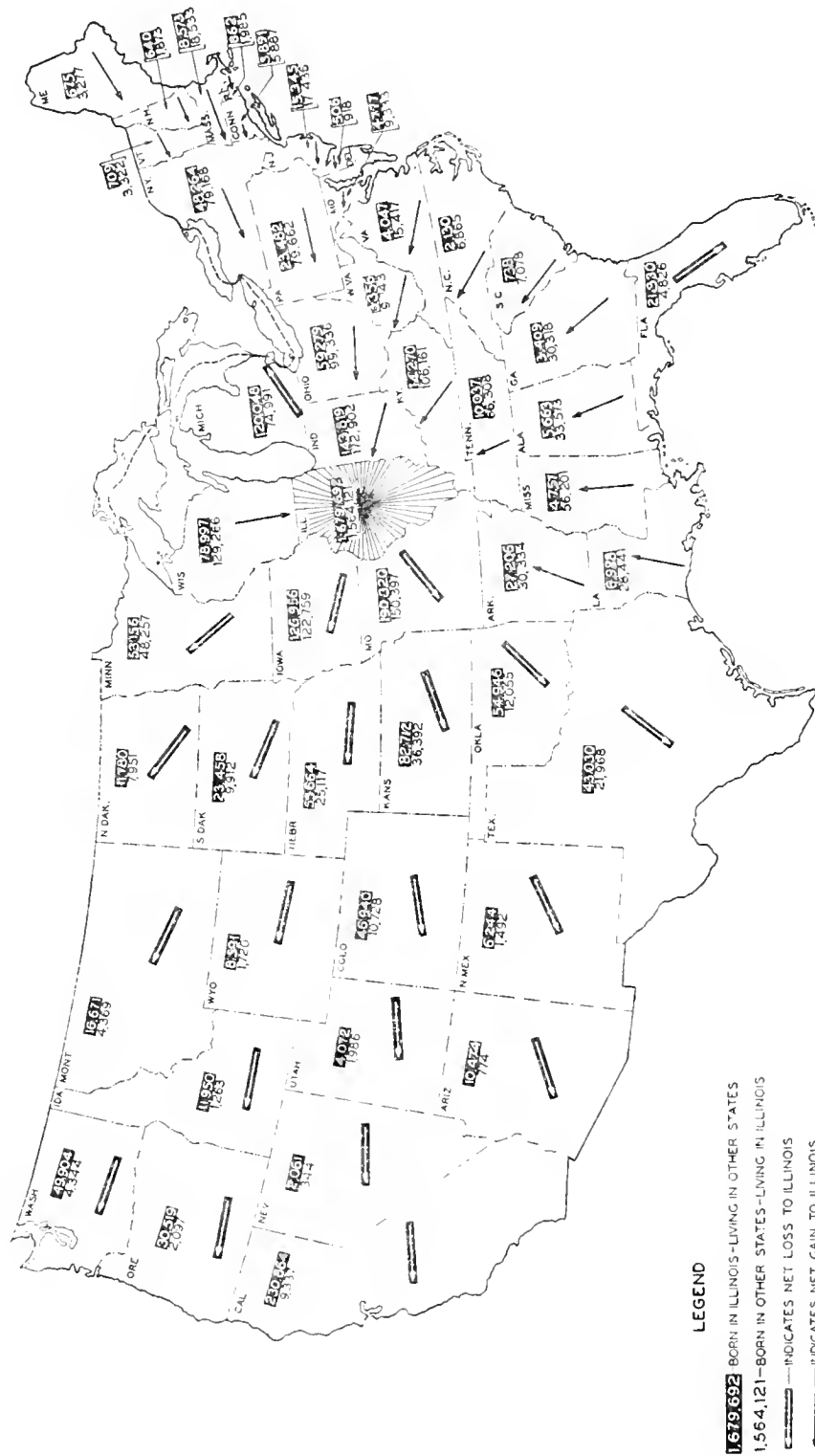
An inventory of needed public works has been submitted to the Public Works Administration;

A harmonized State reclamation program has been recommended to the United States Reclamation Bureau and the Public Works Administration.



Redrawn from report by land planning consultant, June 1, 1935.

ILLINOIS STATE PLANNING COMMISSION DEC. 1934



EFFECT OF INTERSTATE MIGRATION ON ILLINOIS POPULATION AN ANALYSIS OF 1930 U.S. CENSUS FIGURES

ILLINOIS

STATE PLANNING COMMISSION

GOVERNOR'S BOARD APPOINTED DECEMBER 3, 1933

LAW ENACTED JULY 2, 1935

Organization and Staff

An Illinois State Planning Commission, authorized by a joint resolution of the legislature on June 30, 1933, was appointed by Gov. Henry Horner on December 3, following. Members are: Robert Kingery, director of the State department of public works and building, chairman; M. M. Baker, Peoria; D. H. Burnham, Chicago; Leonard Condon, Rockford; Donald B. Craig, Matton; Abel Davis, Chicago; Dr. N. S. Davis, III, Chicago; Emmett Griffin, East St. Louis; Dr. Frank J. Jirka, director of the State department of public health; Verne E. Joy, Centralia; John Kapp, Springfield; Edward L. Karraker, Jonesboro; Dr. M. M. Leighton, chief of the State geological survey; Walter W. McLaughlin, director of the State department of agriculture; B. F. Stein, Chicago; C. F. Thompson, director of the State department of conservation; and Walter Wheatley, Harrisburg. Henry L. Kellogg, of Chicago, is State planning engineer; and Herbert E. Hudson of Chicago is chief of staff. Jacob L. Crane, Jr. of Chicago was assigned by the National Planning Board as consultant. Later Fred E. Schlots was assigned as land-planning consultant by the National Resources Board.

Background and Citizen Support

State planning in Illinois began in 1930 when the Illinois Chamber of Commerce, stimulated by the record of the Chicago Plan Commission and the Chicago Regional Planning Association, completed a preliminary

report on comprehensive planning for the State in January 1931. As a result, a joint resolution was passed by the Illinois General Assembly authorizing a governor's commission on State planning. A commission was appointed, but was not provided with funds. City planning conferences held in Champaign and Urbana have done much to increase public interest in local and State planning.

Duties and Functions

The State Planning Act of 1935 described the duties and functions of the commission as follows:

* * * To make a thorough study and investigation of the natural resources of the State and of the problems of agriculture, industry, and population. The commission shall formulate plans and make recommendations for the further development of the State's resources which will be helpful to agriculture, labor, mining, manufacturing, industry, the transportation of persons and goods, the conservation of forests, soil, stream flow, parks and parkways, game preserves and other resources and activities in the State, and for adequate provision for the future population of the State.

The commission shall have power to utilize any department or agency of the State government in the preparation of such plans, and to employ such experts and assistants as it may deem necessary * * *.

Funds and Appropriations

From December 18, 1933, to May 1, 1935, expenditures totaled \$59,000, of which \$23,200 was furnished by the C. W. A., \$29,000 by the F. E. R. A., and \$6,800 by the State. The act of 1935 appropriates \$15,000 for salaries of a nucleus staff, and operating expenses

ACCOMPLISHMENTS AND RECOMMENDATIONS

Two reports have been issued by the commission, a progress report July 1934, and a summary report of findings and recommendations December 1934. A great deal of basic data has been assembled and is being compiled for publication.

The commission and its staff have made:

- (1) Studies of population trends, and a 1960 population forecast for each city, village, and rural area;
- (2) Studies of the economic status of the State's population, based on occupations, farm and wage income, employment and unemployment, value of owned homes, retail sales, and relief load;
- (3) Analyses of the costs of education in the State and indication of future school needs, based on prospective age group composition of the population;
- (4) A statement of public-health problems and needs and recommendations for extension of public-health services;
- (5) An inventory of recreational facilities and needs, and a study of leisure-time activities;
- (6) A collection of basic data and a beginning of the study of agriculture and land use in Illinois, in which the land-use consultant assisted materially;
- (7) A comprehensive inventory of mineral resources, and of mineral production, marketing, and research;
- (8) Studies of Illinois water resources, with recommendations on specific projects for flood control, soil

erosion, metropolitan water districts, and legislation for control of water resources;

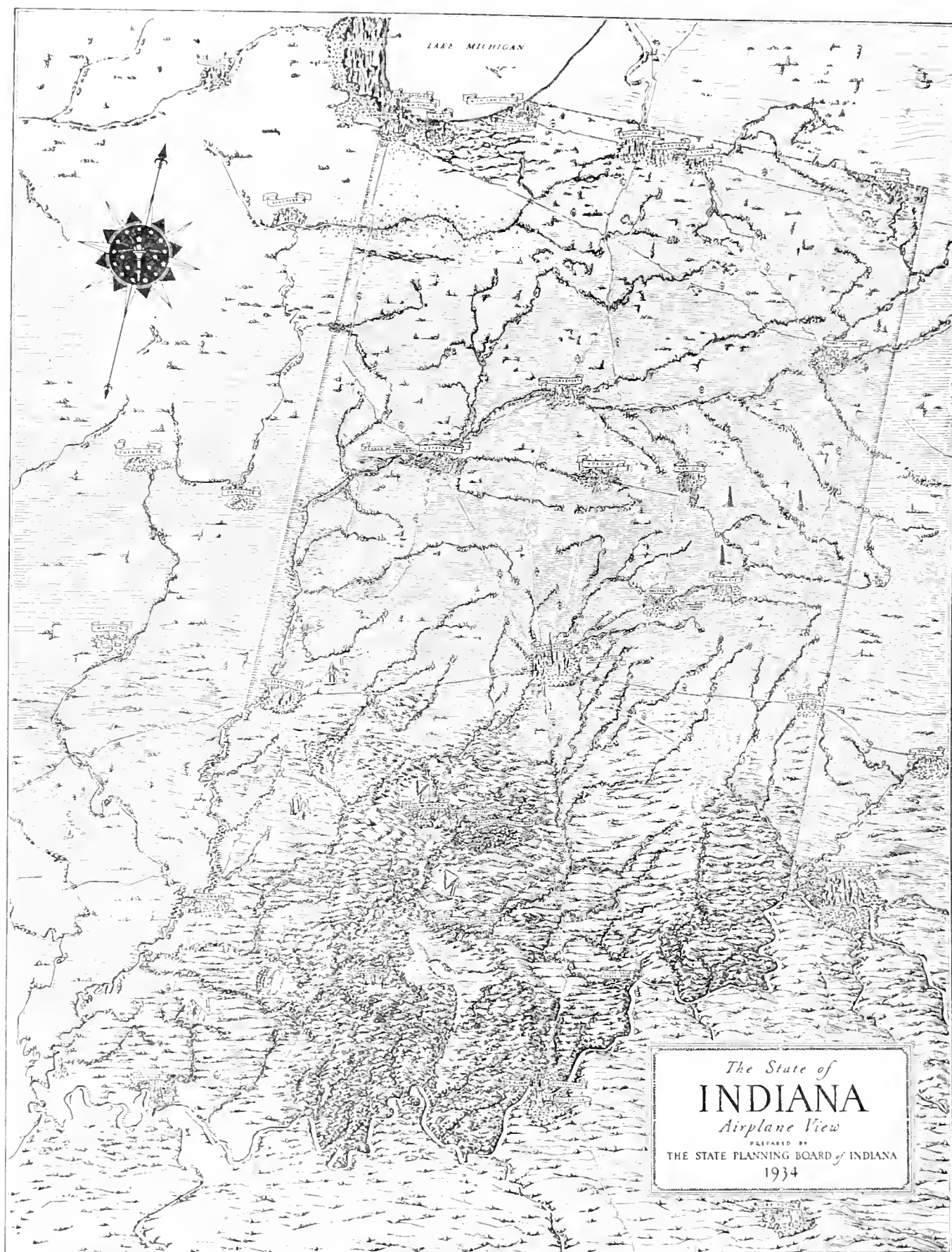
(9) A study of railroad, highway, waterway, and air transport in Illinois, and their interrelationship;

(10) Studies of industrial trends in production, decentralization, cost elements, employment, and wages;

(11) A comprehensive inventory of Federal, State, and local public works, later supplemented by the Public Works inventory of February 1935, which was made in collaboration with the Public Works Administration;

(12) A method of estimating the normal requirements of various classes of Public Works, by mathematical ratio to the population, for cities of 50,000 or less.

(13) A statement of government and taxation problems in Illinois. In connection with relief programs of the Illinois Emergency Relief Administration the staff has: Conducted negotiations for reservoirs and other work projects in the Big Muddy River Basin; made economic reports on watershed areas, particularly in the problem areas of the State; conducted investigations for rural rehabilitation projects; assumed direction of the rural electrification survey; rendered general statistical service; supervised work relief airport projects; and directed and supervised real property inventories.



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From "Preliminary Report, State Planning Board of Indiana", 1934. By permission.

INDIANA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 10, 1934

Organization and Staff

In response to the National Planning Board's offer to cooperate in developing a State plan for Indiana, Gov. Paul V. McNutt appointed a State planning board on February 10, 1934. The members of the original board included John W. Wheeler, member of the State highway commission, chairman; Virgil M. Simmons, director of public works; Dr. Verne K. Harvey, director of the division of health; Charles E. Arnt, chairman of the Michigan City Planning Commission; Prof. George E. Lommel, of Purdue University; Albert W. Hartig, member of the city plan commission of Evansville, and J. Frank Cantwell of Indianapolis. Upon recommendation of the board, Lawrence V. Sheridan of Indianapolis was assigned by the National Planning Board as consultant and Raymond W. Blanchard, Evansville, as associate consultant. Later Leonard H. Rhodes was assigned as land planning consultant by the National Resources Board.

Following the passage in February 1935 of the law creating a State planning board as an official part of the State government, the board was reorganized and the following additional members appointed: Wayne Coy, director of the Governor's commission on unemployment relief; Dean J. H. Skinner, director of the Agricultural Experiment Station at Purdue University; Dr. W. N. Logan, State geologist, Dr. B. D. Myers, dean of the school of medicine at Indiana University, and J. Clyde Hoffman representing the Indiana City Planning Association. The staff, furnished by C. W. A. and later by F. E. R. A., averaged 40 people during the first year.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Extensive data on the physical, social, and economic conditions of the State were published in the preliminary report in September 1934. The report has been much commended on the clarity of presentation and pictorial charts. The agricultural experiment station, Indiana and Purdue Universities, the various State departments, and other private and public agencies cooperated in preparing the report.

After its completion the staff devoted its attention to the following projects:

1. The preparation of a list of emergency projects suitable for the absorption of unemployed and relief personnel;
2. The preparation of a series of base-maps, covering by quadrangles the entire State, on a scale of 1 inch to 1 mile, preliminary to the preparation of the State master plan;
3. Demonstrational studies in five typical counties to reveal the history of public works development, future needs and possible methods of finance;

LAW ENACTED FEBRUARY 23, 1935 (CH. 74)

Background and Citizen Support

Indiana has exhibited much activity in city planning during the past 10 years with 22 cities now having plan commissions. The Indiana City Planning Association meets occasionally to discuss common problems. An important factor in the progress made by the State planning board has been the vigorous and consistent support given to the work by the Governor.

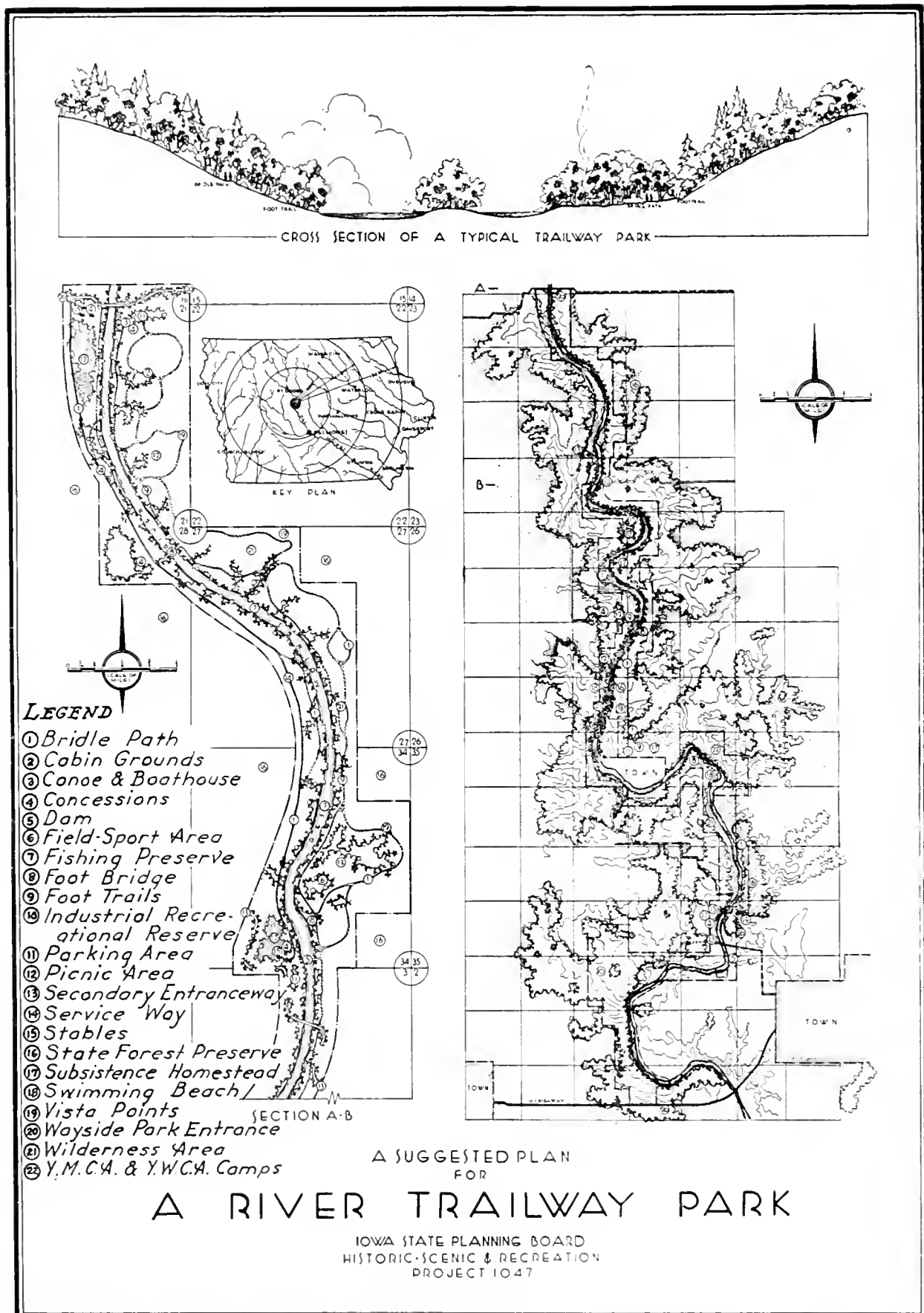
Duties and Functions

By the act of 1935 the board is empowered to make inquiries, investigations, and surveys concerning the resources of all sections of the State; to assemble and analyze the data thus obtained and to formulate plans for the conservation of such resources and for the intelligent and systematic utilization and development thereof; to make recommendations as to the best methods of such conservation, utilization and development, and to cooperate with the National Resources Board in planning for these purposes. It is the duty of the board also to make and adopt an official master plan for the physical and economic development of the State and to prepare and keep up to date a long-term development program. Provision also is made for cooperation with local planning commissions and the encouragement of detail studies, planning, and the programming of public works in cities and counties.

Funds and Appropriations

The State emergency relief administration supported the board from its inception contributing an average of \$4,000 per month. Supplies, equipment, and office space were furnished. Recently an appropriation of \$10,550 has been made from the contingent fund of the Governor for the remainder of 1935.

4. Studies of housing in cities, particularly with reference to slum districts;
5. Continued study of problems of land-use, including research into the dietary requirements of the population, and a consideration of land requirements to meet this need;
6. Study of problems of gainful occupation, with particular attention to the development of a plan of investigation of industry in the State, to determine problems of manufacturing and mercantile establishments;
7. Transportation studies, which have included conferences with railroad executives, truck and bus operators, and shippers, for the purpose of discussing coordinated transportation;
8. Preparation of the inventory of public works in cooperation with the State P. W. A. engineer;
9. Drafting and securing the passage of an enabling act to permit counties to appoint planning commissions and to adopt zoning ordinances; also a revision of the city planning enabling act;
10. Preparation of a supplemental report, submitted February 22, which included recommendations for detail studies directly related to planning.



IOWA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 17, 1934

Organization and Staff

In February 1934, Gov. Clyde L. Herring appointed an Iowa State Planning Board of 16 members, all of whom were representative technical, professional, business, or agricultural leaders of the State. They were: Dean H. H. Kildee, chairman, head of the department of agriculture at Iowa State College; Dr. W. L. Biering, State health commissioner and president of the American Medical Association; Fred Bohlen, president of the Meridith Publications; Dr. W. C. Boone, member of the fish and game commission; J. N. Darling, chief of Federal Biological Survey; Mrs. Henry Frankel, member of board of conservation; P. F. Hopkins, State P. W. A. engineer; Mrs. Fred Jarvis, Federation of Women's Clubs; George Keller, rural rehabilitation director; Mrs. Grace King, Federation of Women's Clubs; Frank D. Paine, engineer; Dean C. A. Phillips, College of Commerce, State University of Iowa; A. E. Rapp, fish and game commission; Mrs. H. S. Vincent, Federation of Women's Clubs; Dr. A. C. Trowbridge, State geologist; Fred White, chief engineer, highway commission; William P. Woodcock, State board of conservation; P. H. Elwood, director, and A. H. Wieters, secretary. The National Planning Board assigned P. H. Elwood and S. Herbert Hare as consultants. Later Albert J. Englehorn was assigned as land planning consultant.

On June 5, 1935, the Governor of Iowa appointed a new planning board, all but two of which were members of the retiring board. Members of the new board are: H. H. Kildee, chairman, dean of agriculture, Iowa State College, Ames; T. R. Agg, dean of engineering, Iowa State College, Ames; Walter L. Biering, State health commissioner, Des Moines; Mrs. Henry Frankel, State board of conservation, Des Moines; P. F. Hopkins, chief engineer, P. W. A., Des Moines; George J. Keller, director, rural rehabilitation, Iowa City; Chester A. Phillips, dean of commerce, State University of Iowa, Iowa City; Miss Agnes Samuelson, State superintendent of public instruction, Des Moines; A. C. Trowbridge, State geologist, Iowa City; and Fred R. White, chief engineer, highway commission, Ames.

Background and Citizen Support

The pioneer work of the extension service, the research data compiled by the various colleges and

WILL AGAIN SUBMIT BILL TO LEGISLATURE

universities, and the "Twenty-five Year Conservation Plan" (1933), offer excellent material upon which to base a comprehensive State-wide survey.

Numerous town, city, and county planning agencies, working independently, have operated in Iowa in recent years. In the 1 year of its existence, the Iowa State planning board has accomplished substantial progress toward the coordination of local planning efforts. An increasing tendency to utilize the data and material assembled by the board, and to consult it in connection with local plans, is becoming apparent.

Duties and Functions

An enabling act creating the Iowa State planning board as a permanent branch of State government, failed at passage in a last minute legislative jam in the Iowa General Assembly, in April 1934. The bill emerged from the State senate with virtually no opposition and remained as unfinished business in the lower branch as a result of confusion in the final hours of the legislative session.

The duties of the planning board, as stated in the proposed enabling act and in the executive order, are to investigate and study existing conditions or conditions which may develop; to prepare plans and coordinate the plans of other agencies insofar as it may be within its means so to do for the use, possession, and preservation of land, water, human, and commercial resources in Iowa. Public officers of the State, counties, and municipalities are to render all possible assistance, and the board is to have access to all public records which are not declared confidential by statute.

Funds and Appropriations

Funds for the planning board were made available through the splendid cooperation of the Iowa Emergency Relief Administration. The average monthly budget of the State planning board in the last year was approximately \$30,000.

More than 250 technical and professional experts from all walks of Iowa life donated their services and time to the program of the board. State departments, universities, and colleges supplied office space, equipment, laboratories, and other essentials. A conservative estimate of the value of this additional help is approximately \$25,000 a month.

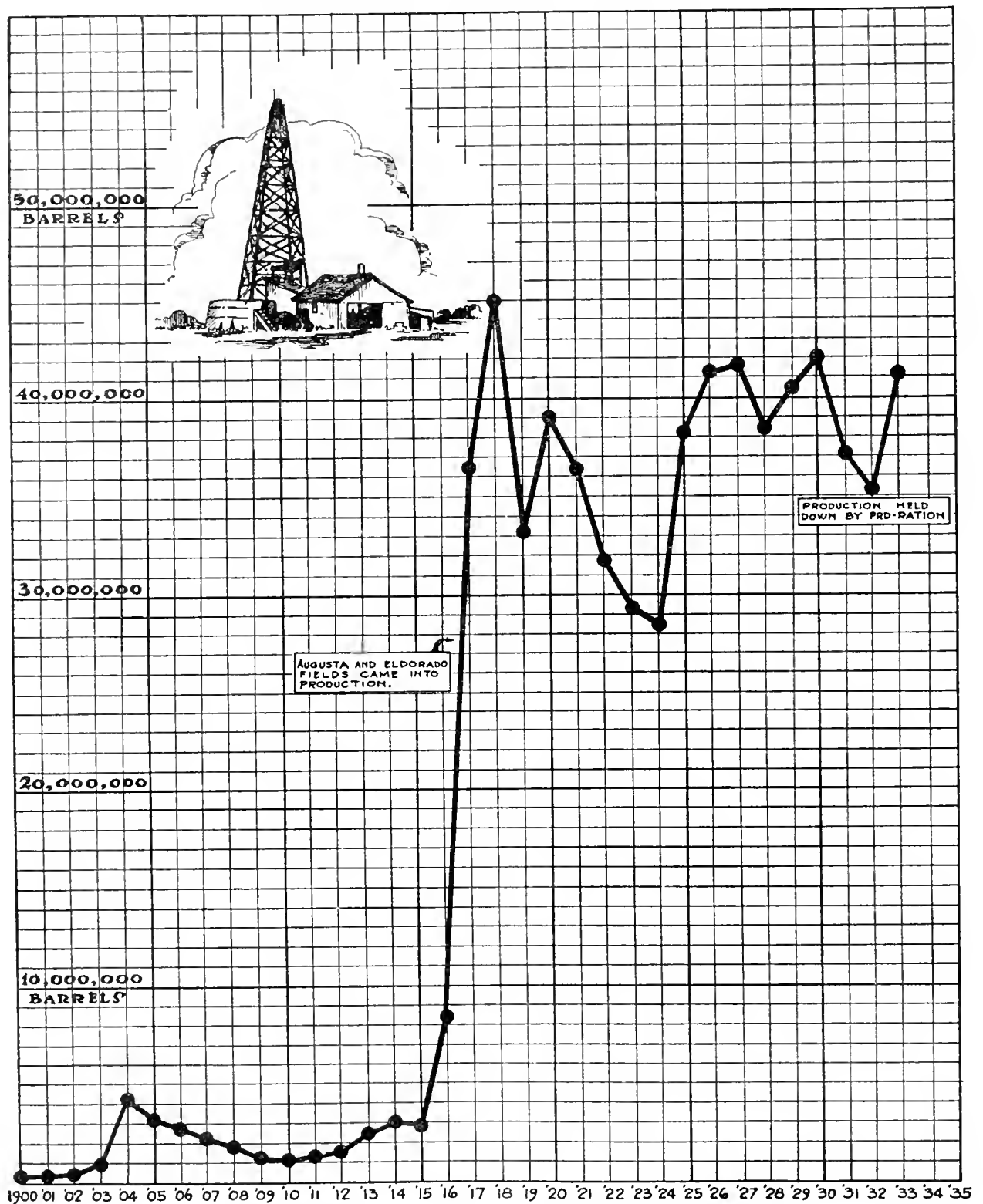
ACCOMPLISHMENTS AND RECOMMENDATIONS

Owing to Iowa's primary interest in land problems, much of the board's work centered on that subject. Projects conducted during the last year included: Land utilization surveys; economic analysis of land use problems such as part-time farming, forests and waste land, soils, and erosion control; surveys on fish and game, transportation, town and village housing, city housing, health, industry and business zoning; public education, population and social trends, surface and subsurface water, and stream pollution; setting up gaging stations on streams and recording stream

flow; listing of historic, scenic, and recreational localities; surveys of public services, public works, and a special survey of the lower Des Moines River. The results of these studies were indicated in a 6 months' progress report published in September 1934. More complete information is contained in the 12 months' progress report published in April 1935.

An important achievement of the board was the establishment of close working arrangements with State and Federal agencies, all of whom have freely cooperated.

KANSAS STATE PLAN



KANSAS OIL PRODUCTION

KANSAS

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 19, 1934

Organization and Staff

The Kansas State Planning Board was created by executive order of Gov. Alf M. Landon on January 19, 1934, with the following members: Walter Innes, businessman, Wichita; Charles F. Scott, publisher, Iola; E. H. Lindley, chancellor, Kansas University, Lawrence; Dr. F. D. Farrell, president Kansas State College, Manhattan; Dr. Earle G. Brown, secretary Kansas board of health, Topeka; Giles A. Atherton, chairman fish and game commission, El Dorado; Claude Hansen, Jamestown; R. J. Laubengayer, publisher, Salina; Jess Harper, Sitka; C. C. Isley, Dodge City; Mrs. J. E. Johntz, president Kansas Federation of Women's Clubs, Abilene; W. J. Breidenthal, banker, Kansas City; R. J. Paulette, Topeka.

S. Herbert Hare was assigned by the National Planning Board as consultant, and Mr. Samuel Wilson, secretary-manager of the chamber of commerce, an organization which had long been interested in State-wide research, was appointed associate consultant and executive officer. As it was necessary first of all to make provision for the financial support of the board, work was not actively under way until March 2, 1934.

Background and Citizen Support

Agriculture is the direct source of less than 10 percent of the average annual income of the State. Mineral resources are abundant and mineral industries are important factors in the State's economy.

With the exception of the coordinating work done by the legislative council, State planning has had little place in the history of the State. It is remarkable, therefore, that the Kansas State Planning Board has received as generous a measure of support as has been in evidence since its organization.

Duties and Functions

As stated in an enabling act which was submitted to the regular 1935 session of the Kansas Legislature, but defeated, the board sought statutory authority to assume the following powers: (1) To make inquiries, investigations, and surveys concerning natural, agricultural, industrial, social, educational, commercial,

The work of the board has included the creation of informed public opinion in favor of organized planning and the continuation of fundamental research studies. In its first progress report, the State board published an inventory of the natural, social, and economic resources of the State, first of its kind ever made in Kansas.

The board has sought to avoid duplication of effort, and whenever a study to be undertaken seemed properly the function of another department, the planning board has encouraged its prosecution there. The ready cooperation of various State departments and schools has been the occasion of extreme gratification to the board.

In certain fields, notably that of public works, adequate studies of the State's needs could not be made from a central office, and the fullest cooperation of the counties and other political subdivisions was

BILL DEFEATED IN 1935 LEGISLATURE

and economic resources of all sections of the State; (2) to assemble and analyze the data thus obtained, and to formulate plans and recommendations for the conservation of such resources and for the systematic utilization and development thereof; (3) to cooperate with the Federal Government and its agencies, the departments of the State of Kansas and all other public agencies of this State in planning, conservation, utilization, and development of resources.

Although the bill did not receive legislative sanction, the board has continued under the executive authority granted by the Governor. Throughout the year of the board's existence it has actively sought, by means of suitable publicity and by working demonstration, to create in the minds of the people of Kansas some understanding of the benefits to be derived from the perpetuation of a planning board.

Funds and Appropriations

Direct appropriations from the State government have never been available to the Kansas board, and it is doubtful whether, considering economic conditions made more acute by the drought, substantial amounts will be available for some time. The board has been supported during the past year from four main sources. (1) A full-time staff was provided by the Kansas Emergency Relief Committee from March 2, 1934, to January 31, 1935. Help from this source is now limited to clerical assistance from the relief rolls. (2) Until July 1, 1934, all incidental office and travel expenses were provided by the Kansas State Chamber of Commerce and its continued loan of office equipment and personnel has been invaluable. (3) On July 1, 1934, the Spelman fund, a private research foundation interested in Kansas activities, made a grant of \$20,000 to the Kansas State Planning Board. (4) The Governor's office, the State departments and State educational institutions have been extremely generous in their contributions of staff time to the research work of the board. Semipublic organizations, such as chambers of commerce and professional clubs, also rendered considerable assistance.

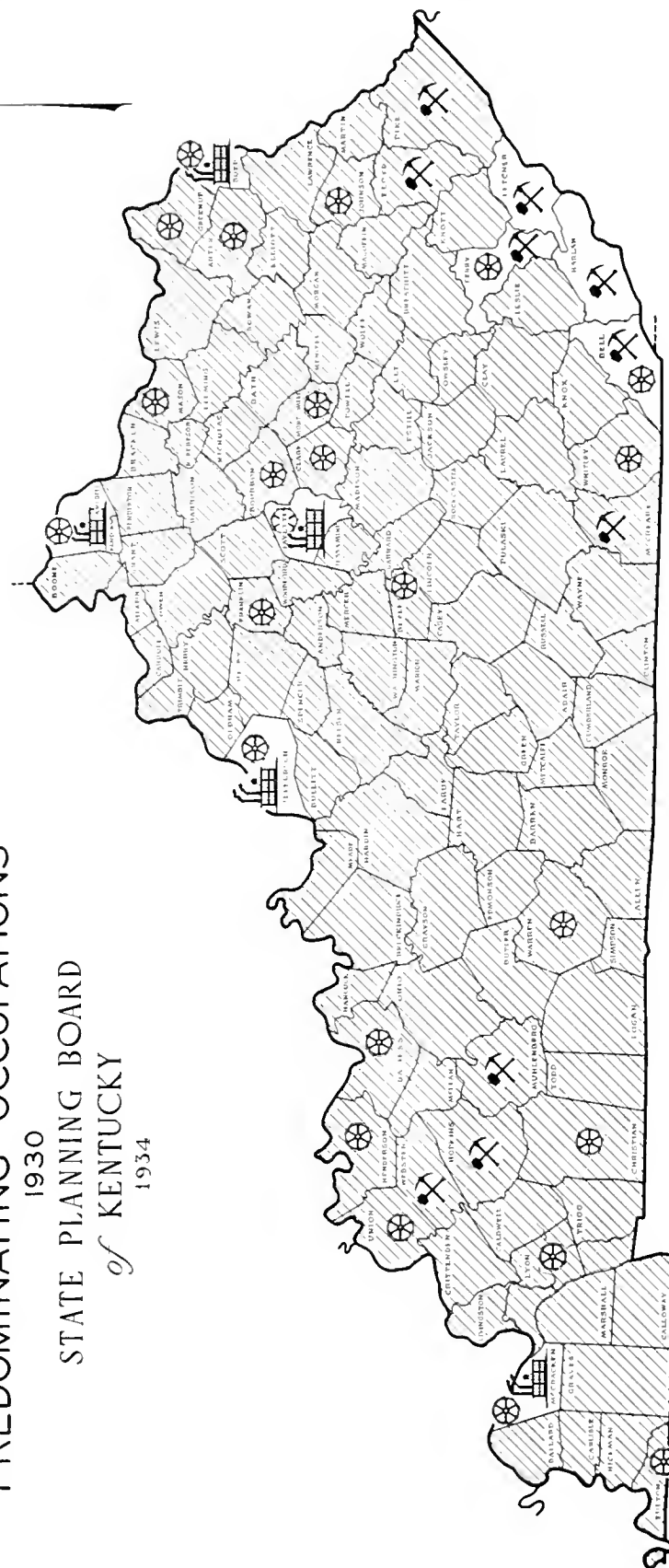
ACCOMPLISHMENTS AND RECOMMENDATIONS

necessary. In these localities the board sought proper performance of the work, and the creation of local interest in planning.

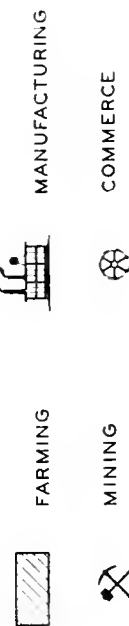
Local planning committees have been organized in three counties and already have completed satisfactory reports. Similar work is under way in three more counties and other will be developed as rapidly as time and resources will permit.

In addition to the first progress report mentioned above, the results of the board's work are available in the following eight pamphlets: Kansas Natural Gas, Coordination of Transport, Rural Schools in Kansas, State Parks and Recreational Areas, An Inventory of Public Works, The Next Twenty Years (Geary County), A Twenty-Five Year Plan for Shawnee County, Second Progress Report, March 1935.

PREDOMINATING OCCUPATIONS 1930 STATE PLANNING BOARD of KENTUCKY 1934



LEGEND



NOTE—COMMERCE INCLUDES ALL OCCUPATIONS OTHER THAN FARMING, MINING, AND MANUFACTURING, AND THEREFORE COVERS ALL WHOLESALE, RETAIL, UTILITY, SERVICE OCCUPATIONS, AND THE PROFESSIONS.

SOURCE OF DATA
OCCUPATION STATISTICS
1930 U.S. CENSUS

KENTUCKY

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED DECEMBER 12, 1933

Organization and Staff

The act creating a State planning board in Kentucky was passed during the regular session of the legislature of 1934. The members appointed to the unofficial board and who have continued to serve on the statutory board, are as follows: H. St. G. T. Carmichael, chairman; F. C. Dugan, State sanitary engineer; J. Lyter Donaldson, chairman of the State highway commission; Dr. James H. Richmond, State superintendent of public instruction; Dr. Frank L. McVey, president of the University of Kentucky; Desha Breckinridge (deceased); W. E. Morrow, and Max B. Nahm. Dr. J. M. Watters was appointed executive secretary of the board, with the title of State planner. James A. Diskin, department of welfare, and Thomas R. Underwood were appointed as members of the board May 26, 1935.

The National Planning Board assigned as consultant L. Segoe, of Cincinnati, who served during the first 6 months. Lawrence V. Sheridan of Indianapolis was later appointed in this capacity by the National Resources Board, and Bruce Poundstone was assigned as land planning consultant. A permanent staff of State planner, statistician, geologist, 2 draftsmen, and 2 secretaries has been established, supplemented by special services supplied by the emergency relief administration and additional personnel employed when needed.

Background and Citizen Support

The cities of Louisville, Ashland, Covington, Lexington, and Paducah have been active in city planning in

ACCOMPLISHMENTS AND RECOMMENDATIONS

The first step in the activities of the board was the preparation of a factual report covering the basic physical, social, and economic data. The agricultural experiment station at Lexington and the University of Kentucky assisted.

The accomplishments of the board may be summarized by the following list of reports made or now in preparation:

A preliminary report covering basic data.

Rural electrification survey to determine possible locations for extension of electrical facilities to rural communities.

Public works inventory of needed and useful public works in the State.

Land use. The land-planning consultant, with the cooperation of the agricultural experiment station of the University of Kentucky, prepared a preliminary report showing land-use areas of the State, together with much additional data on economic and agricultural conditions by minor civil divisions.

Grade-crossing survey, in cooperation with the railroads and the State highway commission. A map is being prepared locating dangerous grade crossings.

Geology. A comprehensive geological study of the State is being made under the direction of the head of the geology department of the University of Kentucky.

LAW ENACTED IN APRIL 1934 (CH. 29)

recent years. Some communities in the State, however, have been without any planning whatsoever, so that apparently there is need for educational work in this field. The press has been generally cordial in its support of planning. State departments, the University of Kentucky and other State colleges, private agencies and individuals have cooperated with and furnished much valuable information to the Board.

Duties and Functions

The act creating the State planning board authorized it to: (1) Prepare and adopt plans for a complete system of State or regional highways, etc.; (2) advise with the various State departments and bureaus, local authorities and individuals; (3) make surveys of rural land utilization for all purposes; (4) draft for submission to the general assembly such regulations affecting the use and development of property; (5) collect and publish information relating to welfare problems and make appropriate recommendations thereon to the general assembly; (6) prepare and adopt plans for regulating the use of property along highways; (7) prepare long-term development programs of major State improvements, coordinate the plans of various departments and submit a report biennially to the legislature.

Funds and Appropriations

An appropriation of \$20,000 per year, for 2 years, was provided by law. The board has worked with and received funds of varying amounts from the Kentucky Emergency Relief Administration.

Governmental units. With the assistance of the bureau of governmental research of the University of Kentucky, a functional study of all governmental agencies is being made to determine the various overlappings and misplacements of administrative functions as between State, county, and municipal units.

Indigents. A survey of the chronic dependents of the State is in progress.

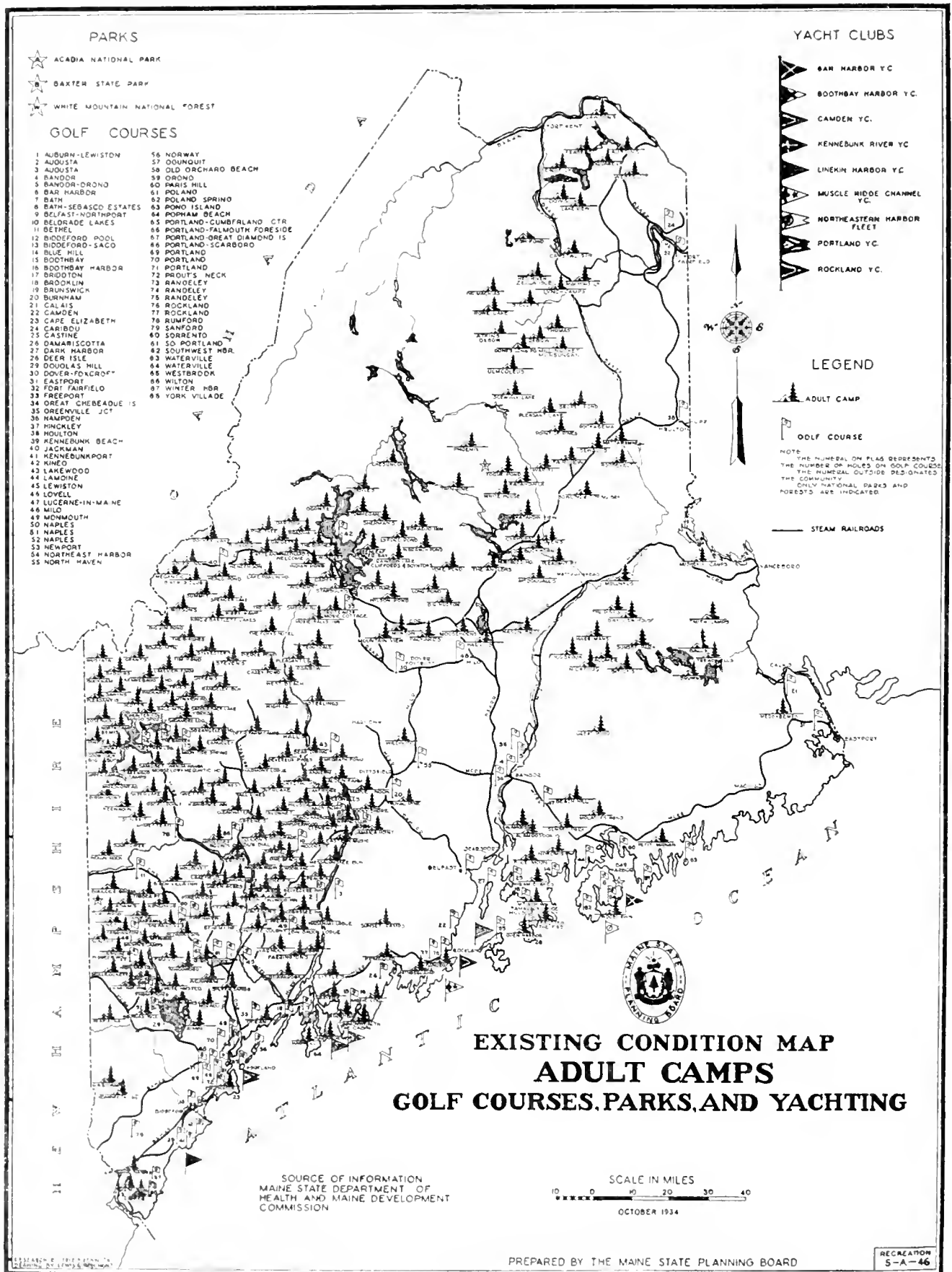
Adult blind. A report on problems relating to care of the adult blind has been completed and is ready for submission to the board. This study was made under the direction of Charles B. Hayes, director of the American Foundation for the Blind in New York City.

Penal institutions. A program designed to modernize these over-crowded and antiquated institutions will be prepared for submission to the next legislature.

State highway program. A study of the State highway system is contemplated with a view to setting up a primary and secondary system of highways and a long-term building program.

Industrial survey, to determine ways and means of leveling the peaks of employment, and of developing the State industrially.

Educational study. The board is cooperating with the curricula study commission of the State Department of education in the preparation of its report.



MAINE

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 9, 1934

Organization and Staff

The Maine State Planning Board was appointed by Gov. Louis J. Brann on January 9, 1934. The members are: Samuel Stewart, of Lewiston, chairman; Edward Chase, commissioner of public utilities; Charles O. Beals, commissioner of labor and industry; Willis B. Mills, of Ellsworth; George J. Stobie, commissioner of inland fisheries and game; and Paul C. Thurston, commissioner of highways.

At the request of the Governor, in early March, 1934, the National Planning Board appointed Arthur C. Comey as consultant, Alfred Mullikin, associate consultant. Later, the National Resources Board assigned Smith C. McIntire as land-planning consultant.

On May 21, 1934, when Federal Emergency Relief Administration funds became available, a staff was established, which soon increased to 46 members. During the second period, beginning September 23, 1934, this force was reduced to 34 members, and on March 28, 1935, was further reduced to 20 members.

Background and Citizen Support

In the State of Maine very little progress has hitherto been made in city or town planning. A few local planning boards, in Mount Desert, Auburn, Rockland, Waterville, and Portland have been set up but have seldom had adequate funds with which to work. The Maine Development Commission (now Association) has since 1925 actively promoted the development and popularization of the many recreational areas of the State.

Although local planning was largely unorganized, certain prominent citizens and officials, through village improvement societies and such agencies as the Hancock County Trustees of Public Reservations, had for years shown an interest in the conservation of the State's natural resources, places of historical interest, and scenic areas.

The Passamaquoddy tidal power project, which during June 1935 was approved by the Federal Government and granted funds to begin operations, was first conceived in 1919 by Dexter Cooper. Preliminary planning of this project to harness the Bay of Fundy tides at Eastport started in 1925 and continued to the

LAW ENACTED APRIL 6, 1935 (CH. 191)

present time. The planning board has since its creation been very active in cooperating on this regional study.

Duties and Functions

The purpose of the Maine State Planning Board, cooperating with the National Resources Board and the New England Regional Planning Commission, has been to promote, through intelligent and comprehensive study, the orderly development of Maine; to act as a clearing house for State department data, and as a central agency to which members of the council and legislature may come to secure definite information and nonpartisan recommendations on matters relating to the welfare of the State.

The duties of the permanent statutory board, as stated in the enabling act signed by the Governor April 6, 1935, and to take effect July 5, 1935, are:

"(a) To cooperate with Federal, regional, State, municipal, and other public agencies on such public works and work-relief projects as are related to the physical, social, and economic welfare of the State;

"(b) To prepare general plans and reports, through research and study, for the orderly and comprehensive development of the resources of Maine, and to submit, upon request, such plans and reports, with conclusions and recommendations, to the Governor and council; and

"(c) To prepare and keep current, biennially, a public works program of major State improvements in cooperation with State, regional, or Federal agencies for promoting planning and the timing of public works in the State, and to submit a report to the Governor and council upon request."

Funds and Appropriations

At the beginning of the planning board's activities the State furnished money from the contingent fund for supplies and equipment, and provided office space. The Federal Emergency Relief Administration furnished funds for the salaries of the staff and, since December 28, 1934, has furnished office space. The State is debarred by the new act from defraying any of the ordinary expenses of the board.

ACCOMPLISHMENTS AND RECOMMENDATIONS

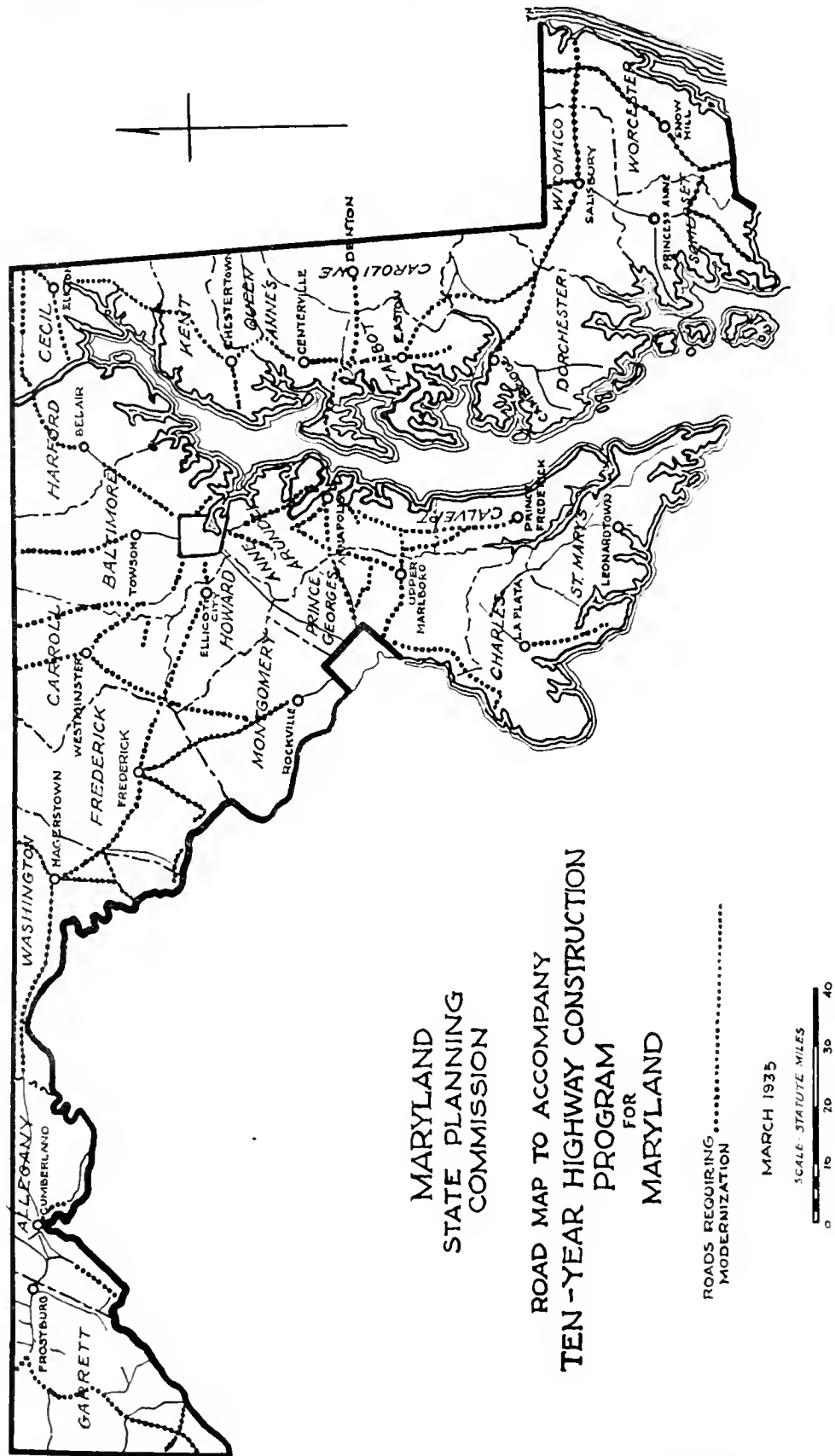
The first year's work was devoted to fact finding, graphic presentation, and to a public works program for immediate guidance. More than 70 maps and many charts are included in the board's general report of March 15, 1935.

While most of Maine's recreational attractions, such as fishing and hunting, are efficiently promoted by private enterprise, public provision of certain facilities is urgently needed. Field studies were concentrated on the broad outlines of a major park and parkway system. The park plan contemplates the development of (1) several additional public ocean beaches and headland areas; (2) several large wilderness parks of mountain and lake scenery; (3) a broad, direct, limited-way type of parkway affording easy, pleasant, and rapid access to the entire State; and (4) a more

circuitous, narrower wilderness parkway. These recommendations constitute an important part of the preliminary land-use plan.

A large amount of valuable data have been compiled concerning water resources, particularly in the important field of hydroelectric power supply and distribution. The board's extensive studies of the Passamaquoddy tidal power project were found valuable in the preparation of the plan and recommendations presented by the Governor's special commission.

Considerable progress has been made on a scheme of coordinated transport, designed to serve the present and future population of the State. This not only will secure better service by rail and road common carriers, but should arouse public support in a program of grade-crossing elimination.



MARYLAND

STATE PLANNING COMMISSION

FIRST BOARD APPOINTED DECEMBER 15, 1933

Organization and Staff

On December 15, 1933, Gov. Albert C. Ritchie approved an act to create a State planning commission (ch. 89), passed by the special session of the Maryland Legislature.

This bill provided for a commission of 5 members; 1 member of the State department of health; 1 a member of the State roads commission; 1 a member of the board of State aid and charities; and 2 other members to be appointed by the Governor. Governor Ritchie selected, in the order in which they are above listed, Dr. Robert H. Riley, Maj. Harry D. Williar, Jr., William L. Galvin, Miss Lavinia Engle, and Abel Wolman, chairman. The National Planning Board assigned Irving C. Root, as State planning consultant, and Thomas F. Hubbard as associate consultant. Mark M. Shoemaker was later assigned by the National Resources Board as land planning consultant, and upon the resignation of Mr. Root, Gilmore Clarke was appointed consultant.

After the inauguration of Gov. Harry W. Nice, the Maryland State Planning Commission was reorganized on June 1, 1935, as follows: former United States Senator Joseph I. Francee, Nathan L. Smith, William L. Galvin, Miss Helena Stauffer, and Abel Wolman, chairman.

Background and Citizen Support

The population of Maryland, 1,630,000, is very unevenly distributed with about one-half of the entire population residing in the city of Baltimore. Being much the largest city, Baltimore was, naturally, the first to establish a zoning commission and a planning commission. Other cities authorized to establish planning and zoning commissions are: Cumberland, Frederick, Salisbury, Gaithersburg, Rockville, and Takoma Park.

There are four metropolitan planning or sanitary districts, one of which, the Maryland-National Capital Park and Planning Commission, has broad planning authority over a large district lying between Baltimore, and Washington, D. C.

Considering Baltimore City, the other incorporated communities and the various sanitary districts, perhaps three-fourths of the population of the State is

LAW ENACTED DECEMBER 15, 1933 (CH. 39)

living under the control of zoning and planning boards, all created before 1933.

The interest of the State of Maryland is further indicated by the enactment in 1935 of a blanket law permitting any incorporated town to establish a zoning commission. This law not only gave authority but set up a form insuring action that would be along lines known to be desirable.

Many prominent citizens, public officials, and professional groups have freely given their time to the work of the State planning commission. The press has been sympathetic, and therefore very helpful in popularizing the idea of planning.

Duties and Functions

By the terms of the 1933 law creating the Maryland State planning commission the duties, in general, are: (1) To prepare and adopt plans for complete systems of State and regional highways, etc., (2) advise with the various State departments and bureaus and with local authorities and individuals, with a view to the coordination of all physical development plans, (3) make surveys of rural land utilization to determine the proper use for each area, (4) draft for submission to the general assembly such regulations affecting the use and development of property as are deemed reasonable and necessary in the interest of orderly and coordinated development, of preserving the integrity of officially approved plans, or conserving the natural resources of the State, (5) collect and publish information relating generally to welfare problems and to State planning, etc.

Funds and Appropriations

Although the State planning act of 1933 provided for the handling and spending of funds, no appropriation was made. Consequently the work was done with no direct expenditures other than a few dollars for postage. The various State departments have cooperated to the best of their ability.

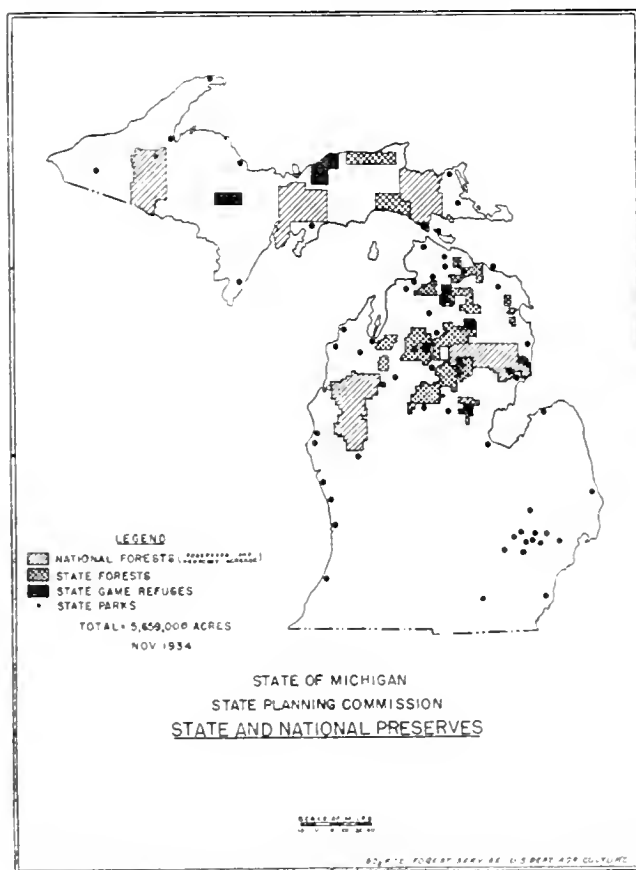
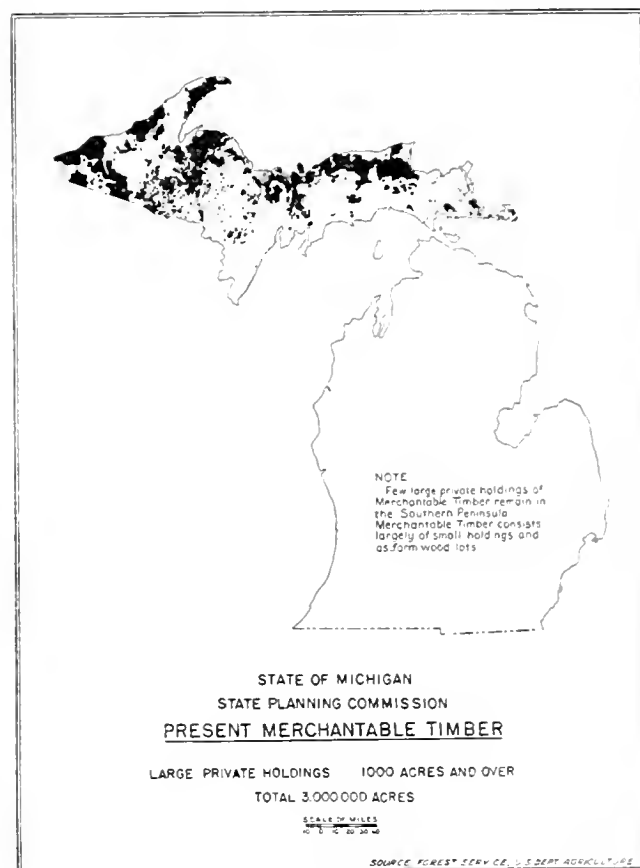
Exclusive of a force engaged for a short while as a Civil Works Administration project, the State emergency relief administration has furnished, as a professional and technical project, the only force of men occupied on a full-time basis with State planning work.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Studies sponsored and upon which published reports have been made are as follows: (1) The population of Maryland, by counties, 1790-1930; (2) the population of the incorporated towns in Maryland, 1790-1930; (3) estimated population of Maryland, 1930-45; (4) conservation problems of Maryland; (5) data on Garrett, Allegany, Washington, and Frederick Counties; (6) 10-year highway construction program for Maryland; (7) preliminary estimates of the probable expenditures for Public Works in Maryland, 1934-43; (8) certain financial aspects of local governments in Maryland;

and (9) preliminary statement of land use in Maryland.

The State planning commission's program for the future is along the same lines. Studies being made or immediately in view include reports on: (1) The financial aspects of the 10-year highway construction program; (2) study of the Baltimore-Washington Boulevard with a view to its improvement and beautification; (3) political organization of county and local governments; (4) study of health requirements in Maryland; (5) the land use problems of Maryland; and (6) a Maryland mapping agency.



MICHIGAN

STATE PLANNING COMMISSION

GOVERNOR'S BOARD APPOINTED JANUARY 16, 1934

Organization and Staff

A State planning commission for Michigan was appointed by former Gov. William Comstock on January 16, 1934, and served without change of personnel until late in January 1935. Members were: Claude S. Carney, department of labor and industry, chairman; Burnett J. Abbott, State administrative board; Dean H. B. Dirks, Michigan State College; Prof. Lewis M. Gram, University of Michigan; George R. Hogarth, director of conservation (later succeeded by P. J. Hoffmaster); Prof. A. T. Sweet, Michigan College of Mining and Technology; M. D. Van Wagoner, highway commissioner; and Dr. Paul F. Voelker, superintendent of public instruction. Milton P. Adams of the stream control commission acted as secretary until the appointment of Gregory V. Drumm as full time executive secretary. Fred C. Taylor was appointed State planning engineer. At the same time, the National Planning Board assigned Jacob L. Crane, Jr., of Chicago, and Walter H. Blucher of Detroit as consultants. Later the National Resources Board assigned R. L. Shaw as land planning consultant.

The present commission is composed of five citizens appointed by Gov. Frank D. Fitzgerald: A. R. Glancy, Detroit, chairman; T. H. Hinchman, Detroit; O. D. McClure, Ishpeming; Harold D. Smith, Ann Arbor, and Frank M. Wade, Flint. The executive secretary, State planning engineer, and consultants of the original commission continue to serve.

Background and Citizen Support

Land planning in Michigan has been carried on for years through the State College, the agricultural experiment station, the department of conservation, the State University, and the Michigan Academy of Science.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The commission, with its committees, played an important role in the initiation of two major development projects—the Waterloo, Allegan, and Au Sable submarginal land rededication projects, and the Saginaw Valley planning authority, which was created by the legislature following a recommendation by the State planning commission.

The commission has collaborated on important projects originating with the Federal Government.

Other accomplishments of the commission and its committees might be itemized: (1) Land-use planning in Michigan has been centralized in the committee on land use; (2) a conservation planning report and program was prepared by the State conservation department; (3) the national resources board inventory of water resources was assisted by the commission; (4) research on mineral resources is under way at the Michigan College of Mining and Technology, sponsored by the committee on mineral resources; (5) studies were made of social and population trends; (6) studies

BILL VETOED BY GOVERNOR IN JUNE 1935

The State's planning committee on education is also of long standing. There are several city planning commissions in Michigan, among which the Detroit commission is outstanding. The Michigan League of Municipalities has helped cities coordinate their activities. The league and all State departments has closely cooperated with the State planning board during its 18 months' existence.

Duties and Functions

The bill to establish the planning commission on a statutory basis, which was vetoed by the Governor, provided that it should:

1. Be the State's official agency in canvassing and rating public works, and cooperate with Federal agencies in the allocations and expenditures of funds on public works, land, and other Federal programs in Michigan;

2. Be the State's central and official agency for coordination, facilitation, and stimulation of all inventory surveys and investigations related to the natural resources of the State and to the economic and social future of industries and citizens dependent thereon;

3. Cooperate with such responsible officers of the State or political subdivisions, or organized groups of citizens, as may request assistance or advice in relation to prevention of undue public liabilities, and in relation to more efficient use of land and other natural resources;

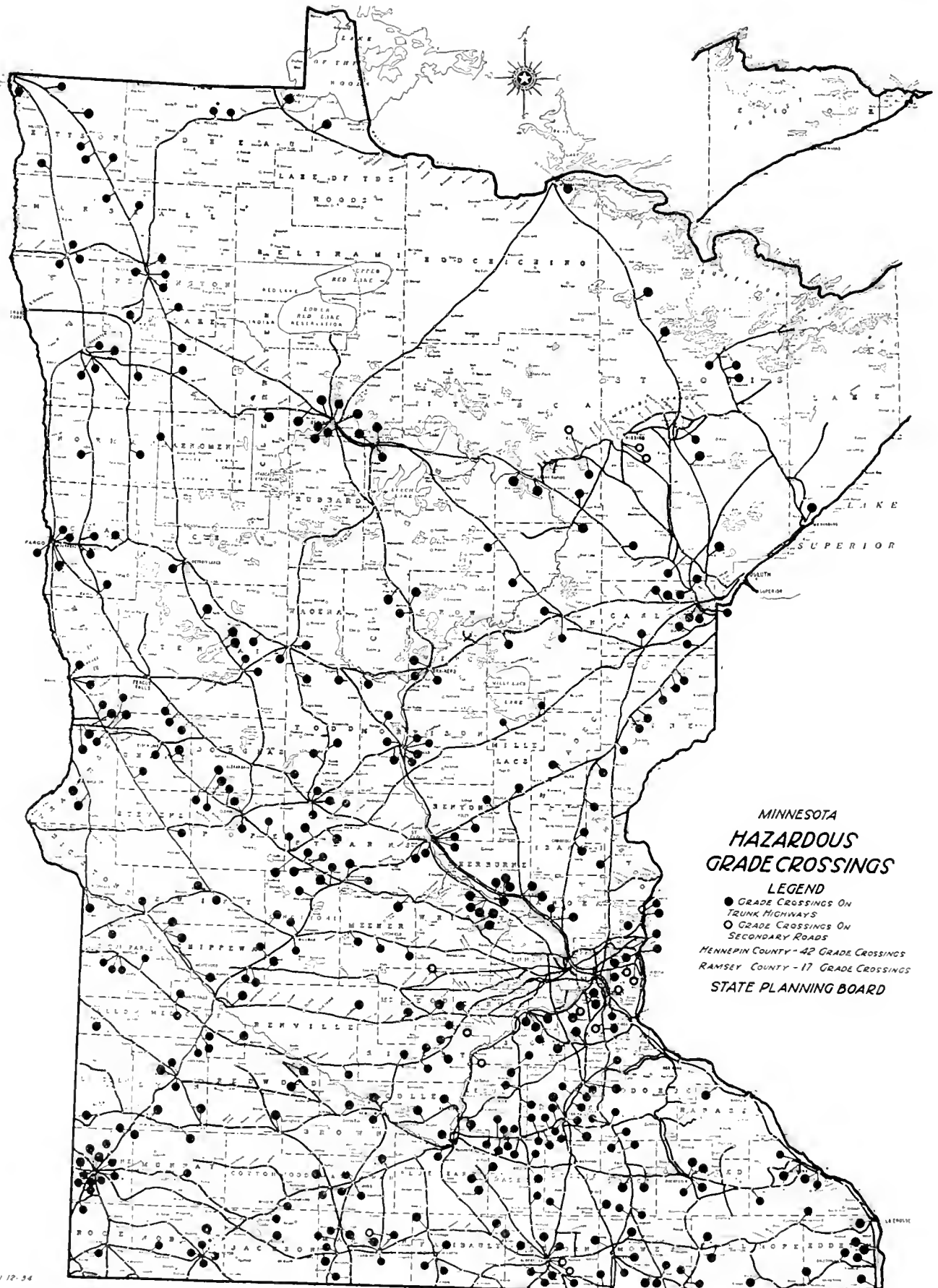
4. Make special investigations of serious misuse of natural resources, causing public loss, where no constituted agency can take action to safeguard the permanent public interest, and report findings, with recommendations, to the Governor.

Funds and Appropriations

An allocation of \$10,000 was made from State funds to carry on State planning work from March 1934 to July 1, 1935. This was supplemented in May 1935 by a deficiency appropriation of \$5,600. Staff work has been financed through a work-relief project of the F. E. R. A.

for a plan for highways were outlined by the highway commission at the suggestion of the State planning commission; (7) statements of educational problems were made and surveys for school district reorganization outlined; (8) studies on governmental organization and public finance made by various investigation committees over a period of years were collected and analyzed; (9) a county zoning act has been adopted by the legislature, providing that the State planning commission shall collaborate on county zoning problems.

The work of the present commission staff has been largely confined to the 1935 inventory of public works, made in cooperation with P. W. A. Work now under way includes: A report to the Governor on a 1-year public works and reemployment program; refinement and expansion of basic planning data; preparation of a report to the Governor summarizing the findings and recommendations of the commission and preparation of a State program for subsistence homesteads.



NEH 12-34

From "Committee Reports—Part II", October 1934.

MINNESOTA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 17, 1934

Organization and Staff

The Minnesota State planning board was appointed by Gov. Floyd B. Olson in February 1934, at the suggestion of the National Planning Board. The members are: Prof. Richard E. Scammon, University of Minnesota, Minneapolis, chairman; N. W. Elsberg, State highway commissioner, Minneapolis, vice chairman; T. H. Arena, conservator, department of rural credit, St. Paul; Roy G. Blakey, professor of economics, University of Minnesota, Minneapolis; Carl R. Carlgren, member State board of control, St. Paul; G. H. Herrold, director of city planning, St. Paul; A. B. Horwitz, city planning engineer, Duluth; O. B. Jesness, professor, chief of division of agricultural economics, university farm, St. Paul; Morris B. Lambie, professor, political science, University of Minnesota, Minneapolis; Mrs. Marion Le Sueur, educator, Minneapolis; F. M. Mann, member, city planning commission, Minneapolis; John F. D. Meighen, attorney, Albert Lea; R. W. Murchie, professor, sociology, university farm, St. Paul; F. W. Murphy, attorney Minneapolis and Wheaton; Knud Wefald, commissioner, railroad and warehouse commission, St. Paul; H. A. Whittaker, director, division of sanitation, Minnesota department of health, Minneapolis; E. V. Willard, commissioner of conservation, St. Paul; L. P. Zimmerman, acting administrator, State emergency relief, St. Paul. Dean Holm was elected executive secretary of the Minnesota State planning board at a meeting held May 18, 1934.

The National Planning Board assigned Roland S. Vaile as consultant to the board. Later H. P. Hanson was assigned by the National Resources Board as land planning consultant. Roy M. Gilcrest has since replaced Mr. Hanson in this capacity.

The active staff of the board at present consists of only six persons. The Governor furnished office space

WILL SUBMIT BILL TO NEXT LEGISLATURE

and accommodations. Many of the State's administrative departments and the State University have loaned technical experts for work on special problems.

Background and Citizen Support

The expansion of the functions of the department of conservation, the State highway department, and the State department of health are indicative of the new attitude toward planning. Encouraged by the success of city planning efforts in Minneapolis, St. Paul, and Duluth, other towns, cities, and villages have sought to regulate and plan their physical development and improvement. The Minnesota League of Municipalities has aided and sponsored much of this work.

Duties and Functions

During the first year of its existence, the State planning board undertook three principal tasks: (1) to determine material and human trends in State development; (2) to forecast future development whenever this can be done with reasonable accuracy; (3) to aid in coordinating current public and private efforts toward the utilization of all resources, so that the people of the State may enjoy the highest scale of living.

The State legislature adjourned late in April 1935, without considering the establishment of a permanent planning board. Pending the enactment of a State planning law, the present board intends to continue its studies along the lines suggested herein.

Funds and Appropriations

The board has been financed mainly by the State emergency relief administration since no funds were appropriated. A budget approximating \$18,000 a year has been suggested as the possible appropriation to cover the expenses for an official board.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The staff has prepared, and the board has accepted, about 350 graphs depicting various phases of development within the State. This material has been reproduced in a report in three parts: Part I, Digest and Interpretation, dated December 1, 1934; Part II, Committee Reports, dated December 1, 1934; Part III, Supplemental Reports, dated April 15, 1935. Part I of this report was published in an edition of 5,000 copies and has been widely distributed throughout the State.

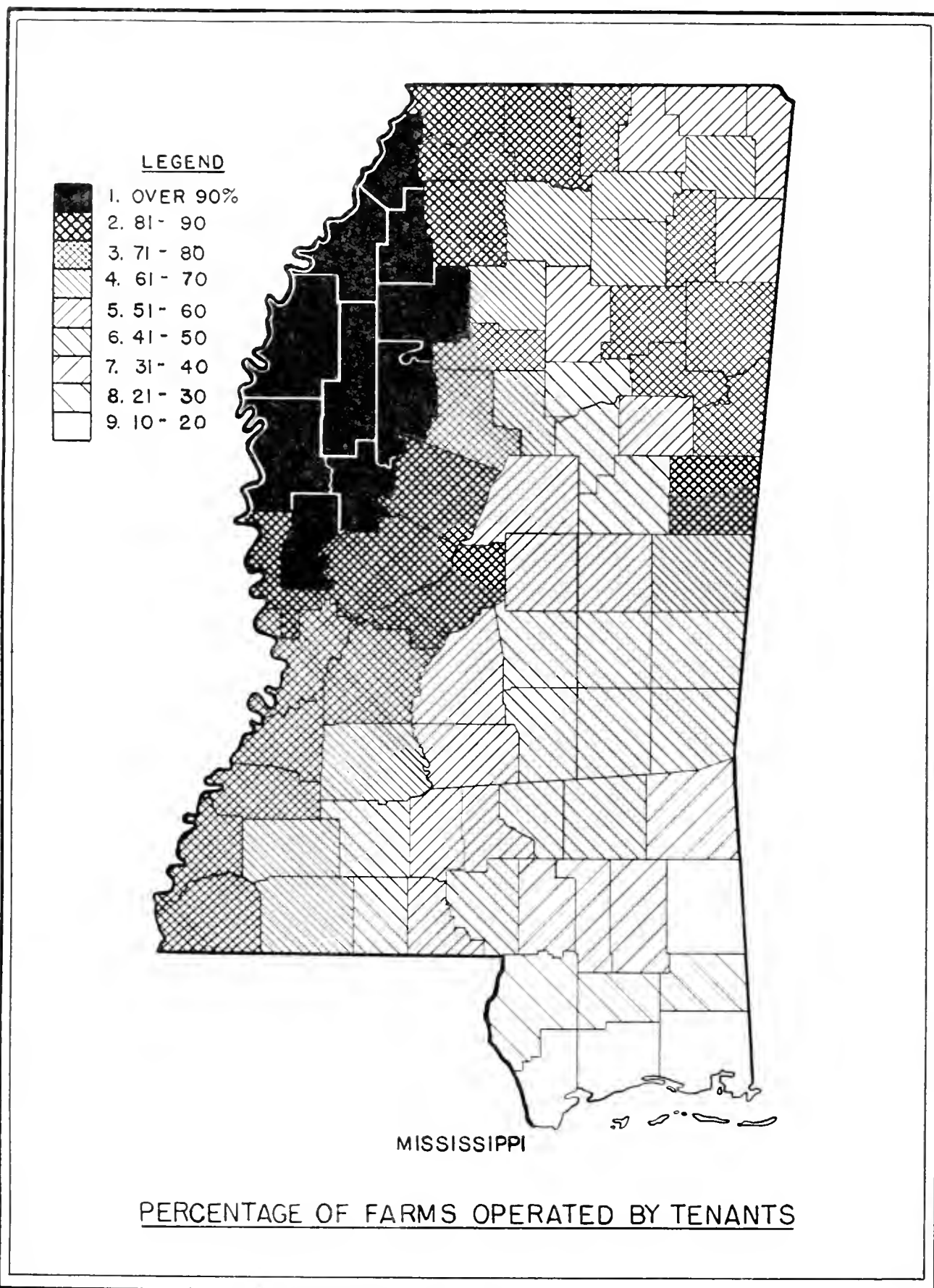
The scope of the reports is indicated by the lists of special committee contributions appearing in parts II and III. These are as follows: Part II—Land use; water resources; forest resources; production and distribution of income; power; transportation; public health; education; welfare institutions; metropolitan; emergency relief administration; taxation and administration units. Part III—Inventory of public works; education above high-school level; recreation; survey of the possibilities for rural electrification.

A study of population trends was basic to several of the committee reports, and is summarized in part I of the report of the board.

Interpretive suggestions were developed from the available data with respect to a number of matters.

It is impossible to summarize all of them here, but reference may be made to a few of the more important: (1) The population trends in Minnesota indicate rapidly approaching stabilization. This has an important bearing on the development of highways, school facilities and, in fact, all physical planning. (2) Coincident with this realization comes the suggestion that new agricultural land need not, possibly should not, be developed. It seems probable that some lands in the northeast third of the State should be zoned against further agricultural development. (3) Consideration of the data on precipitation, run-off, and natural usage leads to the conclusion that water conservation is the most important field for public works in the State during the next 5 or 10 years.

The State planning board has acted as an unofficial cabinet for the State's administrative departments with respect to questions of emergency relief and public works. It has coordinated the plans of the highway, conservation, and education departments, the board of health, and similar agencies. This activity is illustrated by the consideration of water conservation, stream pollution, and sewage-disposal projects in the Red River Valley.



Redrawn from "Final Report on Land Use for the State of Mississippi", May 17, 1935.

MISSISSIPPI

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 23, 1935

Organization and Staff

In response to the National Resources Board's offer of cooperation, Gov. Sennett Conner on January 23, 1935, appointed the Mississippi State Planning Board of which the Governor himself acts as chairman. Members are: Greek L. Rice, A. H. Stone, Dr. F. J. Underwood, E. C. McInnes, C. B. Braun, and L. J.

NO LEGISLATION

Folse, all of Jackson. Mr. Folse was designated secretary, C. O. Henderson and Gerald Gimre were later assigned by the National Resources Board as land planning consultant and State planning consultant respectively.

Headquarters of the board are maintained at the State Capitol in Jackson.

ACCOMPLISHMENTS AND RECOMMENDATIONS

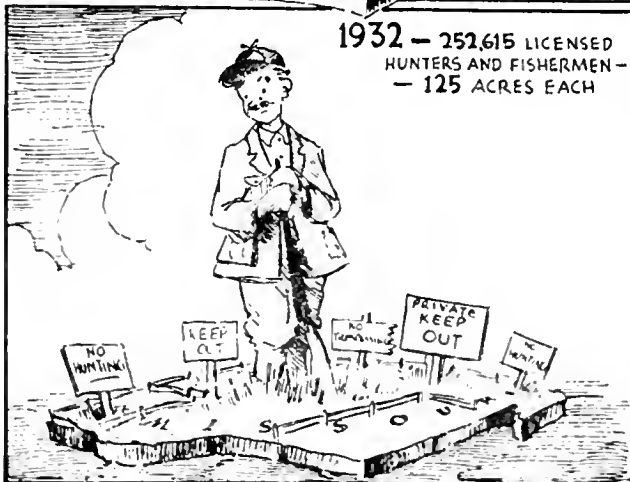
Due to the newness of the board and to lack of funds, the board and the Consultant have devoted their time chiefly to organization problems and to preliminary surveys of State conditions for the purpose of preparing an orderly program of research.

Mr. Gimre prepared an outline for the board's organization, and listed the personnel and equipment needed. This report was submitted to the director of the Mississippi E. R. A., who in turn submitted it to Washington where the matter rests. In the absence of other funds, the board cannot proceed with its work until it is granted personnel from the relief rolls.

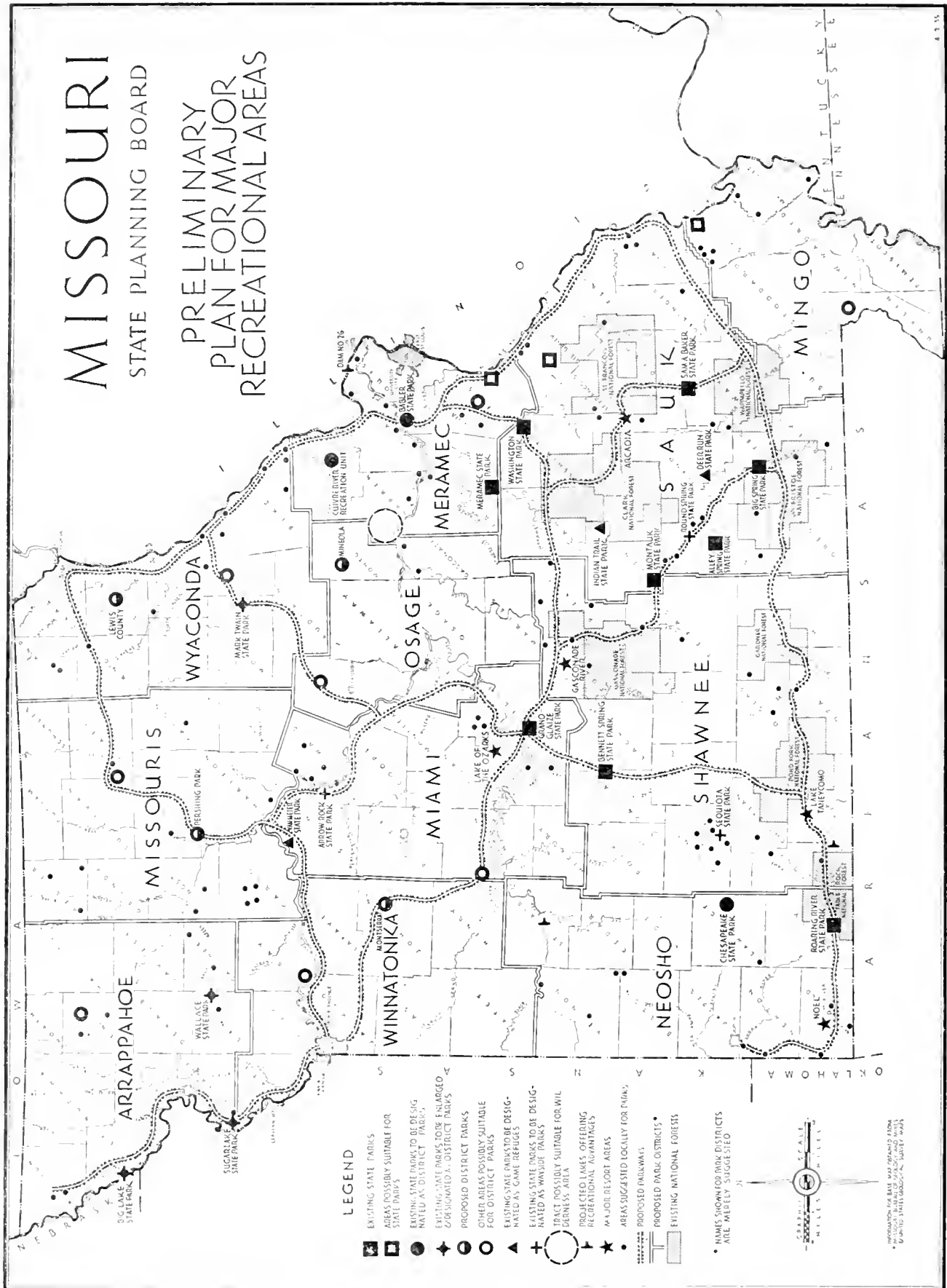
The land planning consultant has, however, made a comprehensive survey of land-use problems in Missis-

sippi, in which it was revealed that there are 19,000,000 acres of idle cut-over land, of which 9,000,000 are suitable for agricultural purposes. He recommends that the Government acquire sufficient arable land upon which to settle several hundred farm families now on relief, which would provide a permanent living through a combination of reforestation, farming, processing, and cooperative marketing, the total project to be self-liquidating.

In cooperation with the State agricultural experiment station, Mr. Henderson has completed maps showing problem areas, soil erosion, and resettlement areas, crop yields, acreages, and has also made an inventory of State-owned land.



Progress Report—Missouri State Planning Board, April 1935.



MISSOURI

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED DECEMBER 29, 1933

LAW ENACTED JUNE 3, 1935

Organization and Staff

On December 29, 1933, Gov. Guy B. Park, at the suggestion of the National Planning Board, appointed the first State planning board in Missouri. It consists of: Prof. R. W. Selvidge, University of Missouri, Columbia, chairman; E. J. Russell, St. Louis City Planning Commission, St. Louis, vice chairman; Gen. E. M. Stayton, consulting engineer, Kansas City, vice chairman; Dr. H. A. Buehler, State geologist, Rolla; Herbert Bosh, sanitary engineer, State board of health, Jefferson City; T. H. Cutler, chief engineer, State highway commission, Jefferson City; Wilbur C. Buford, State fish and game commissioner, Jefferson City; A. P. Greensfelder, chairman, St. Louis County Planning Commission, University City; Dean A. S. Langsdorf, Washington University, St. Louis; Dean F. B. Mumford, University of Missouri, Columbia; J. C. Nichols, member national capital park and planning commission, Kansas City; Maj. Lloyd C. Stark, Horticulturist, Louisiana; Hugh Stephens, president Citizens' Road Association of Missouri, Jefferson City; United States Senator H. S. Truman, Independence; T. A. Wilson, secretary State highway commission, Jefferson City, acting secretary. S. Herbert Hare and Harland Bartholomew were assigned by the National Planning Board as consultants. Later Dr. C. H. Hammar was assigned land planning consultant by the National Resources Board. A staff of 11 members has been continued with funds made available by the Emergency Relief Administration.

Background and Citizen Support

While several cities and suburbs of the State have maintained city planning commissions for a number of

years, the subject of planning is relatively new in Missouri. A Missouri State Planning Conference was organized in 1930, but very little progress has been made in acquainting any large proportion of the citizens with the purposes and advantages of State, regional, and local planning.

Bills providing for the creation of official planning commissions and for authorizing county zoning have failed of passage in the last three sessions of the Missouri Legislature for this reason. However, there is a growing interest in State and county planning which, if sustained by the Missouri Board, will unquestionably result in the enactment of additional legislation at the next session of the legislature.

Duties and Functions

Pending the enactment of legislation, the State planning board collected data and formulated plans intended to bring about a coordinated development of the State. Such functions are essentially the same as those prescribed by the law finally enacted June 3, 1935.

Funds and Appropriations

Virtually all of the funds made available to the State planning board to date have been received from the Civil Works and the Emergency Relief Administrations. Active cooperation and assistance have been given by the college of agriculture, the Missouri State Highway Commission, the fish and game commission, and all State departments. It is estimated that an annual appropriation of from 25 to 50 thousand dollars could be expended to great advantage and with profit to the State.

ACCOMPLISHMENTS AND RECOMMENDATIONS

In the belief that the board could not formulate a reliable program of work until it had adequate knowledge of various conditions in the State—physical, social, and economic—one of the principal functions of the office has been to collect and analyze information in many fields.

In the further belief that public understanding must be the basis for satisfactory planning and coordination of public work, the board has endeavored to present the information collected in attractive form. More than 90 maps and drawings have been prepared.

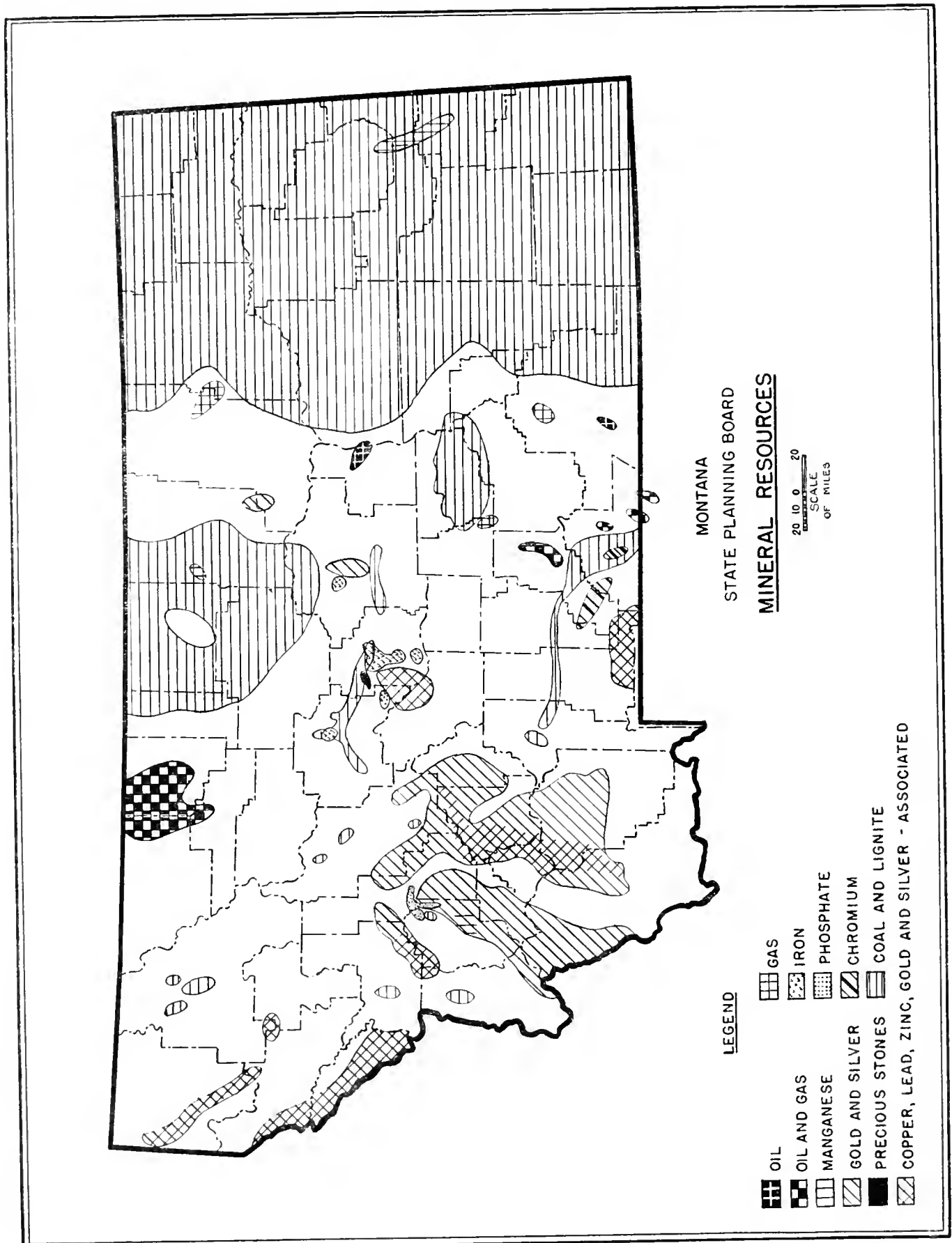
There is much additional fact-finding and statistical work needed in Missouri. The topographic mapping work of the Geological Survey is only about 38 percent completed, and the Soil Survey is only about 50 percent completed. There is an extraordinary deficiency in facts and information relating to public health and social conditions in the State.

The Missouri State Planning Board has encouraged the creation of county planning agencies, even though there are almost no funds at present for the financing of local work. Fifteen county planning boards have been appointed in Missouri in the last 3 months and more will be created soon. Some of these boards are already at work collecting information through volunteer services, thus forming the background for county and State plans and programs.

An exhaustive study of population has been undertaken and a forecast made as to future characteristics and trends in the State.

The board has worked continuously with the Public Works Administration in an effort to bring about the selection of the most socially desirable public works and projects which afford the greatest opportunities for the relief of unemployment. In the course of preparation of the recent public-works inventory, a special study was made of grade crossings throughout the State, a study which will be of great value in setting up future public-works programs.

Since the approval of the State planning board is required upon all submarginal land retirement projects, considerable time and attention have been given to proposed parks and forest projects. Eight large national forest projects have been approved and property acquisition is proceeding in all of them. To date 6 park projects, 1 soil-erosion project and 1 reservoir project have been approved and are in various stages of operation. Of special significance is the proposed Ozark Parkway, which will connect with several State parks and national forests, affording recreational opportunity for tourists and for a large percentage of the State's population. This project has received preliminary approval, and a field reconnaissance is now in progress.



MONTANA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED DECEMBER 29, 1933

LAW ENACTED IN FEBRUARY 1935 (CH. 176)

Organization and Staff

The appointment of a State planning board was suggested to Gov. F. H. Cooney in November 1933 by the National Planning Board through its regional chairman, Marshall N. Dana of Portland, Oreg. The Montana legislature was convened in special session for the purpose of creating a State authority to cooperate with the Public Works Administration in the construction of self-liquidating water conservation projects. The authority which was created was the official State planning board, and bore the title of Montana Water Conservation and Planning Board.

This dual board is composed of five members. The Governor and State engineer J. S. James are ex officio, and three members at large are appointed by the Governor. These are I. D. O'Donnell of Billings, D. P. Fabrick of Chateau, and R. R. Purcell of Helena. The National Resources Board assigned L. A. Campbell as planning consultant and R. B. Haight as land planning consultant.

In February 1935, the legislature continued the water conservation and planning board, and by a separate law created the State planning board. It designated as its members the persons serving on the water conservation board.

The staff consists of an executive secretary, 2 reconnaissance field engineers, 3 draftsmen, and stenographers. Funds are available to increase the staff as the work of the board progresses.

Background and Citizen Support

State planning in Montana, in the sense now used by the present State planning board, began 4 years ago with the organization of a State water conservation committee. The committee, whose members included public officials and interested citizens of the State, was concerned with problems in respect to the economic use of land and water.

Through the committee's efforts to coordinate the work of various Montana State agencies, a foundation for planning was well established at the time the permanent State planning board was appointed. The people of the State were satisfied with the progress made by the water conservation committee and were generous in supporting subsequent planning legislation.

In March 1934 a State planning conference was held. As a result of this the State was divided into 12 dis-

tricts, each having a representative as a member of an advisory planning council to the State planning board. Each district councillor is responsible for stimulating the organization and activity of county and municipal planning agencies within his district. Of the 56 counties in the State, 47 have county planning boards which were active during the past 12 months. Special State committees on land, water, mineral, timber, and other resources have been organized for the research and analysis of data needed for preparing plans and programs. These committees are composed largely of technically trained men, regularly employed in public service.

Duties and Functions

It is the duty of the State planning board to make and adopt a comprehensive plan for the physical development of the State. The board must make an annual report to the Governor, and must report and make recommendations to the Governor, the legislature, any State agency, or any political subdivision of the State, regarding any matters relating to the State plan or to any phase of the State planning program.

The board has power to promote public interest in the problem of State planning, and to that end may publish and distribute copies of any plan or report. It may confer and cooperate with Federal officials and with the planning authorities of neighboring States or regions for the purpose of coordinating Montana's plans with the plans and policies of other State, regional, and national-planning agencies.

The board is authorized to encourage the formation and activity of municipal, county, district, and other local planning bodies within the State, and render to them all possible assistance.

Funds and Appropriations

In February 1935 the legislature provided the water conservation and planning board an annual appropriation of \$100,000 for administrative expenses for the following biennium, and a revolving fund of \$500,000. The latter fund may be used for surveys or other necessary planning studies. The planning board is authorized to spend \$20,000 of the revolving fund for administrative or other expenses. Previously the board was given financial support by the Montanans, Inc.

ACCOMPLISHMENTS AND RECOMMENDATIONS

During the first year of its official existence, the board's greatest accomplishment has been the stimulation of popular support for planning, chiefly through its district organization and advisory council.

Planning studies have enabled the board to determine methods of establishing greater stability for agriculture and industry, of improving the condition of families in distress.

Various State agencies already have adopted reasonably definite policies and plans with respect to water conservation, rural rehabilitation, restoration of submarginal lands for range use, designation of submarginal areas for recreational development, and assistance to

smaller mining enterprises; rural electrification, public works, highways, feeder roads, and grade crossing elimination. This material is being coordinated and surveys and studies are to determine State policies for: Taxation, public-school education, zoning of submarginal areas, social welfare, and industrial development.

The planning of programs, endorsed by public opinion, has been accompanied by surveys of specific projects or activities to make the programs effective. Since State planning in Montana has been centralized under a dual agency, the Montana water conservation and planning board, it is provided with an operating agency for the execution of its programs.

NEBRASKA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 17, 1934

Organization and Staff

A Nebraska State Planning Board was appointed first by Gov. Charles Bryan on February 17, 1934. The members are: D. H. Smith, chairman, Lincoln, State tax commissioner; Roy T. Cochran, Lincoln, State engineer (later Governor); J. B. Douglas, Tecumseh, member of the State game, forestation, and parks commission; A. F. Buechler, Grand Island, newspaper publisher; J. E. Davison, Omaha, public utilities operator; and Gene Huse, Norfolk, publisher. The National Resources Board assigned Arthur W. Anderson to the board as land planning consultant in August 1934.

In January 1935, Governor Cochran, appointed the following members to the board: A. C. Tilley, chairman Lincoln, State engineer; Harry Tracy, city engineer of Norfolk; Mayor F. C. Zigenhein of Nebraska City; Earl D. Mallery, city manager of Albany; A. F. Buechler, Grand Island, newspaper publisher; Henry Smith, Hastings, newspaper publisher; and John A. Rine, Omaha, attorney. Dr. G. E. Condra, director, conservation and soil survey, University of Nebraska, Lincoln, and W. W. Burr, dean agricultural college, Lincoln, were also appointed members of the Nebraska State Planning Board. Arthur Anderson continued to serve as land planning consultant to the new board.

The first planning board was inactive. Mr. Anderson however, maintained headquarters for conducting land-planning studies at the agricultural experiment station at Lincoln. The second State planning board compiled and examined inventories of public-works projects. Legislation to establish the board on a permanent basis has not been passed by the legislature.

Background and Citizen Support

Because of the demands upon the natural resources of the soil, land-use studies have been the chief concern of planning research in Nebraska. Approximately 98 percent of the total land area in the State is in farms and ranches.

ACCOMPLISHMENTS AND RECOMMENDATIONS

At the request of the Public Works Administration, the board prepared and submitted an inventory of public works projects in February 1935. For the purpose of examining and classifying the projects submitted by various governmental agencies, the board held sessions at four different locations in the State. It did not officially recommend any of the projects which were examined, since the limited time and information available prevented detailed investigation. Approximately 800 projects submitted by more than 400 governmental subdivisions were considered by the board. Their total estimated cost is \$81,500,000.

Under the direction of Arthur Anderson, land planning consultant, two reports of the land use planning studies have been made. A tentative classification of the major land-use problems follows: (1) Water erosion of the silty soils of the glacial drift and loess hill areas; (2) wind erosion of the sandy soils; (3) shallow soil areas of low productivity and erosive

NO LEGISLATION

Soil resources have been the subject of State surveys for some years, and the conservation and survey division of the University of Nebraska will soon complete the field work of the soil surveys for the entire State. The division has also conducted surveys of the geology of the State, the water resources, and of the wildlife with consequent conservation of soil and water resources. Some researches in land use have been made by the State game, forestation, and park commission. Twenty-six recreational areas in the State are now under the supervision of the commission, and about \$5,000 has been spent annually in research.

Upon the organization of the State planning board in 1934 and the appointment of the land-planning consultant, an advisory committee for land-planning studies was appointed with Dean W. W. Burr of the college of agriculture of the University of Nebraska, chairman, and the following members: W. H. Brokaw, Dean G. E. Condra, Dr. F. D. Kerm, Prof. H. C. Filley, Prof. J. C. Russel, C. W. Watkins, I. P. Wood, and F. A. Hayes.

Duties and Functions

Despite the fact that the legislature adjourned without defining the duties and functions of the board, carefully planned and conducted researches and studies of land uses will be the immediate objectives of the board. An attempt will be made to coordinate the efforts of the several State departments in studies of the State's human and natural resources.

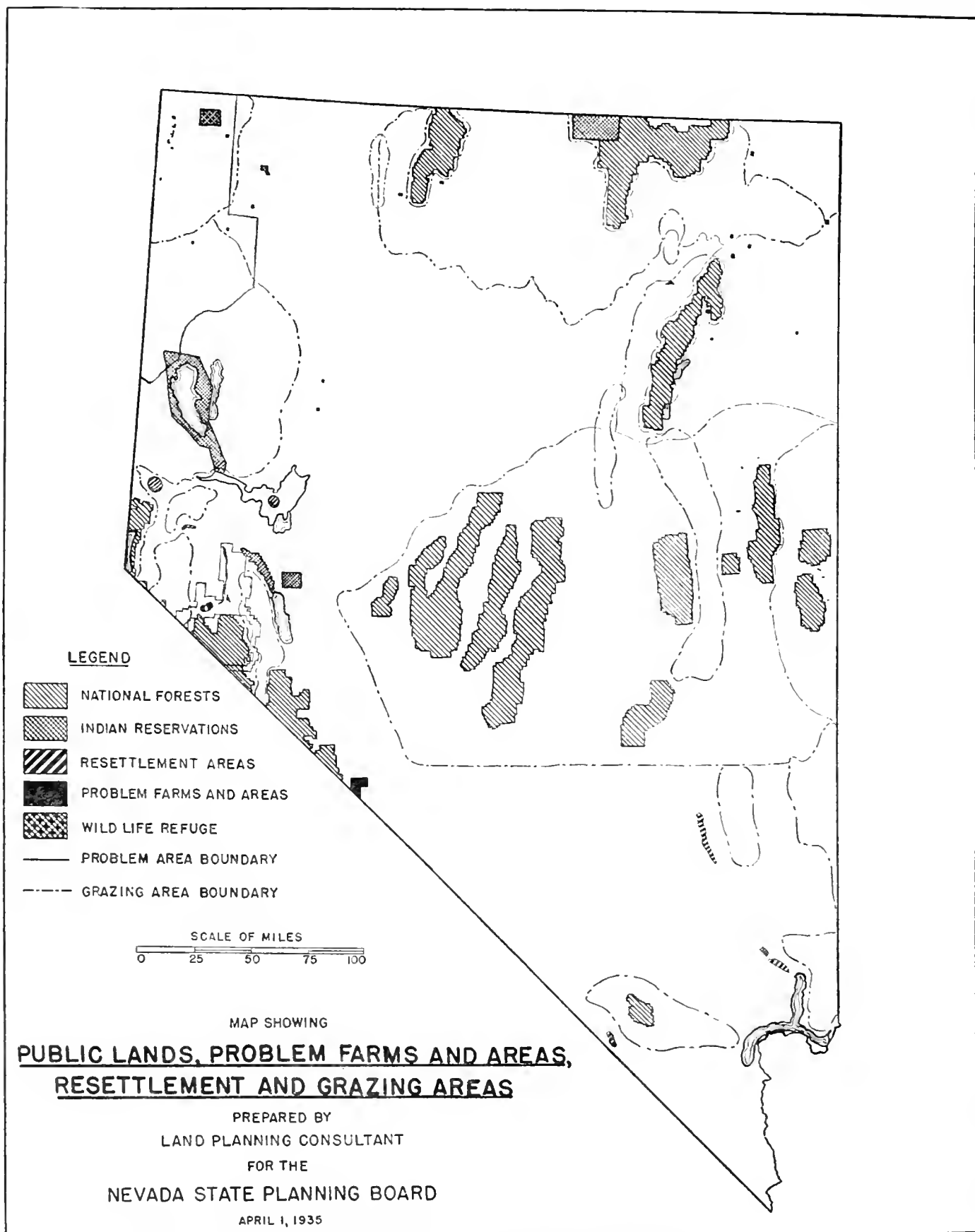
Funds and Appropriations

The planning board appointed in February 1934, was entirely without funds, which hampered the organization of the board and all efforts to establish a staff or headquarters. However, the State legislature appropriated \$15,000 for the expenses of the new governor's board, appointed in January 1935.

qualities; (4) heavy clayey soils presenting water, tilth, and erosion problems; (5) mixed soil areas; (6) irrigation problems of irrigated districts; and (7) conservation and development of timber and park resources of the Pine Ridge area.

Proposed adjustments in land use to be considered are: (1) Extension of orchard crops, particularly apple production in the loess hill area of southeast Nebraska; (2) production of vegetable canning crops on selected lowland and terrace soils of the Platte and Missouri Valleys and similar areas; (3) expansion of poultry enterprises in the more productive section of eastern Nebraska favorably situated with respect to market and transportation facilities; (4) development of potential irrigation projects and expansion of pump irrigation in the Platte Valley and similar areas.

The nature and extent of these adjustments can be determined only from future planning board studies of all the resources of the State.



Redrawn from "Final Report of Land Planning Consultant to National Resources Board," May 20, 1935.

NEVADA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 5, 1935

Organization and Staff

The organization meeting of the Nevada State Planning Board was held on February 5, 1935, after the following men had been appointed by Governor Kirman: Robert A. Allen, civil and irrigation engineer and State public works administration engineer, chairman; John A. Fulton, mining engineer and director of the Mackay School of Mines, Reno, executive secretary; J. H. Buehler, mining engineer, Pioche; George Russell, Jr., livestock man of Elko; Archie Grant, business man, Las Vegas; George W. Malone, State

WILL AGAIN SUBMIT BILL TO LEGISLATURE

engineer, Carson City (later replaced by Fred Dangberg, stockman, Minden); A. M. Smith, mining engineer, Reno.

The National Resources Board assigned George Hardman, agricultural economics department, University of Nevada, as land-planning consultant.

The board has encouraged the organization of local planning units in the various towns and counties in Nevada, and it now appears likely that southern Nevada will have a number of these planning organizations in operation in the near future.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Pending the enactment of the State planning bill, which was lost in the jam at the close of the 1935 legislative session, the board has broadly interpreted its functions.

One of the most important projects in which the State planning board has interested itself has been the establishment of adequate power districts and facilities in the Boulder Dam area. The board has presented plans involving wide-spread industrial expansion in that region, through the utilization of the cheap power which will be afforded by the dam. It has been requested by the Federal Government to work in conjunction with the public-works administration in Reno in compiling the public-works inventory. It has assisted in the solution of various problems dealing mainly with the revival of mining; the establishment of adequate irrigation plans, the promotion of recreational facilities, rebuilding of civic structures, local and industrial electrification, and other matters pertaining to the up-building of the State. Recommendations recently prepared by the board are as follows: (1) Thorough study of the feeder-road problem in Nevada, with a view to the encouragement of Federal participation in this work; (2) encouragement of local rehabilitation in the agricultural areas; (3)

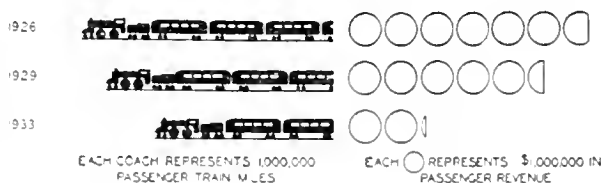
aiding the educational districts throughout the State, and encouraging the rebuilding of obsolete and inadequate schools; (4) an analytical study of the present labor situation and employment of relief through public-works activities.

The following problem and resettlement areas have been completely surveyed: (1) Northern Washoe County problem area, report written and outline of purchase project submitted; (2) Walker River irrigation district, West Side Canal and other areas. Problem area report also written and outline of purchase project submitted; (3) Truckee Carson irrigation district, Soda Lake, and other areas. Problem area report completed; (4) Lake Tahoe Forest acquisition project. Report completed; (5) Pahrump Valley resettlement area, report completed; (6) Pahrnagat Valley resettlement area, report completed; (7) Panaca resettlement and rural-industrial community, report in progress.

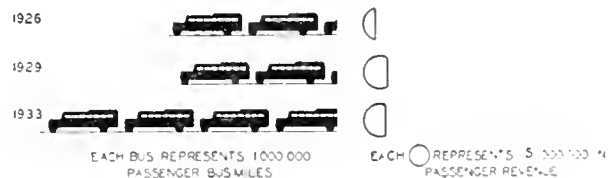
In addition, much data has been gathered on other possible resettlement areas, as the Spring Valley and Baker Ranch in White Pine County. Investigations of areas around Boulder Canyon Reservoir are under way with a view to making specific recommendations to the Administration in Washington.

TRENDS IN PASSENGER TRANSPORTATION SERVICES

DECLINE IN RAILROAD PASSENGER SERVICE MILEAGE AND REVENUE

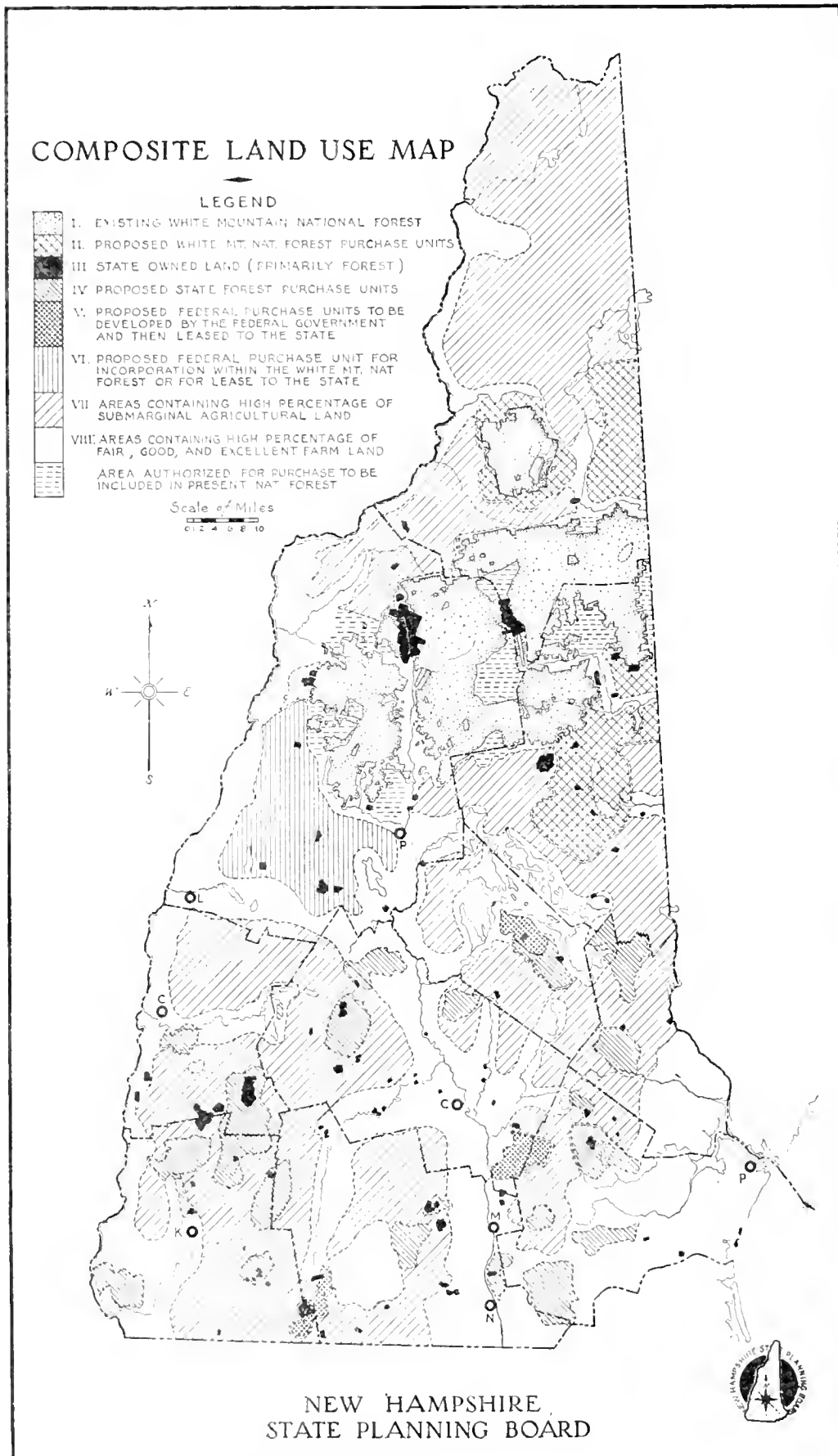


DEVELOPMENT OF MOTOR BUS SERVICE AND REVENUE



NEW HAMPSHIRE STATE PLANNING AND DEVELOPMENT COMMISSION

From "State Planning, New Hampshire", March 15, 1935.



From "State Planning, New Hampshire", March 15, 1935.

NEW HAMPSHIRE

STATE PLANNING AND DEVELOPMENT COMMISSION

GOVERNOR'S BOARD APPOINTED DECEMBER 3, 1933

Organization and Staff

Quickly responsive to the offer of the National Planning Board to cooperate and advise in the establishment of State planning, Gov. John G. Winant, on December 3, 1933, appointed the New Hampshire State Planning Board, one of the first boards so established. The board consisted of the following members: James M. Langley, chairman; Dr. John P. Bowler, Dartmouth College; Marston Heard; Dr. E. M. Lewis, president University of New Hampshire; Prof. Artemas Packard, Dartmouth College; Mrs. Eva Speare; Hon. William F. Sullivan; Frederic E. Everett, State highway commissioner; John H. Foster, State forester; Dr. James N. Pringle, commissioner of education; and Thomas Dreier, Edgar H. Hunter, and Arthur S. Morris of the State development commission. This representative board continued to act, with no changes in its membership, until the establishment of the statutory commission. The National Planning Board assigned John Nolen, Justin R. Hartzog and Geoffrey Platt, as State planning consultants. Later, the National Resources Board assigned Albert LaFleur as land planning consultant.

The statutory commission, appointed February 20, 1935, consists of the following: James M. Langley, Concord, chairman; Mayor Robert Marvin, Portsmouth; Guy Shorey, Gorham; Edmund Jewell, publisher, Manchester; Allen Hollis, Concord; Capt. Charles F. Bowen, managing director, New Hampshire State planning and development commission, Concord; and Donald D. Tuttle, publicity director, New Hampshire State planning and Development Commission, Concord. Messrs. Hartzog and LaFleur have continued to serve the new board.

The commission does its work by means of a permanent staff and committee organization under the administrative guidance of a paid managing director responsible to the commission of five members. The State planning act of 1935 merged the State planning board and the State development commission.

Background and Citizen Support

For several years prior to the appointment of the Governor's board, the State development commission,

LAW ENACTED FEBRUARY 20, 1935 (CH. 92)

the New Hampshire foundation, a number of State departments, the press, various semipublic agencies, and many private agencies and individuals had actively supported the planning and conservation of the State's resources.

Researches by universities in recent years have provided a considerable amount of useful data, and have contributed also to the popular interest in planning problems.

Tangible results had been obtained in the creation of over a hundred reservations for forest and recreation purposes; in preserving scenic features of the State, such as the "Old Man of the Mountain"; in highway and roadside development; and in passage of a comprehensive zoning enabling act in 1925. A number of cities and towns had appointed unofficial planning boards as committees, there being no city planning enabling legislation, and twelve of the municipalities had prepared zoning ordinances under the zoning act.

Duties and Functions

The planning division of the commission is charged by law with the preparation and keeping up to date of a plan for the orderly development of the resources of the State; keeping the Governor and council informed as to the progress of this plan and making available such information as may be required for advancing the welfare of the State; encouraging, by advisement, planning by cities and towns, or groups of cities and towns; encouraging the extension and correlation of State planning by agencies of the State government; and participating in interstate, regional, and national planning efforts.

Funds and Appropriations

The commission, in its planning division, operates on an average monthly budget of approximately \$2,000. The largest expenditure for any month was \$6,700 under C. W. A. financing, when a staff of some 75 persons was employed during the period of intensive fact-finding surveys. Subsequently, the E. R. A. has generously provided personnel as needed. The sum of \$18,750 has been appropriated by the legislature for the planning activities in each of the next 2 fiscal years, beginning July 1, 1935.

ACCOMPLISHMENTS AND RECOMMENDATIONS

(1) Supported by both Governors Winant and Bridges, an act establishing a permanent State planning agency passed the legislature and was signed by Governor Bridges, February 20, 1935.

(2) The board also considered it timely to prepare and introduce in the 1935 legislature an enabling act to provide for city and town planning. This legislation was passed and approved April 20, 1935.

(3) There has also been introduced, passed, and approved on May 11, 1935, an act authorizing the acquisition of land in the State by the United States and establishing a land-use board.

(4) The commission and the previous State planning board have published five reports dealing with a wide range of planning activities.

The commission recommends that it be made the central agency for both the determination and analysis of facts and problems basic to State planning, and for the dissemination of pertinent information. It should prepare long-term comprehensive plans and their accompanying programs for execution, and furnish leadership for their accomplishment. And, lastly, it should actively cooperate with all Federal, State, and local agencies on physical, social, and economic matters.



From "Preliminary Report Upon Planning Surveys and Studies", September 22, 1934.

NEW JERSEY

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 1934

Organization and Staff

In response to the National Planning Board's offer of cooperation, Governor Moore in February 1934, appointed a temporary State planning board, composed of the following members: Charles P. Messick, chairman; Frank Cook; Maj. George W. Farny; Victor D. Gelineau; Mrs. Channing Gilson; Myron Hendee; Dr. Jacob G. Lipman; Mrs. William L. Rae; and Maj. W. G. Sloan. Assigned to the board as planning consultant and associate consultant, respectively, were Russell Van Nest Black and Bernard B. Eddy; later, Russell M. Bettes was assigned by the National Resources Board as land planning consultant.

A State planning bill, drafted by the temporary board, and passed in May 1934, provided for the creation of a board of nine members. Governor Moore made the appointments as contemplated by the bill, but not until March 1935, after Governor Hoffman's inauguration, was the official State planning board finally placed in office with membership as follows: Dr. Charles P. Messick, chairman, secretary of civil service commission; Maj. W. G. Sloan, State highway engineer; Dr. Jacob G. Lipman, director State agricultural experiment station; C. P. Wilber, State forester; Dr. Harold W. Dodds; Mrs. Edna B. Conklin; George W. Farny; Dr. A. Ralston Green; and John E. Sloane.

The State planning act authorized the employment of an executive secretary-engineer and technical and clerical assistants. During the time the board has been in operation, the staff of the organization has varied between 20 and 30 office and field workers, supplied chiefly by the State E. R. A.

Background and Citizen Support

Planning is not new to the State government of New Jersey. The several State departments and numerous special commissions have been engaged in planning in one form or another for many years. Within the past 8 years, for example, the State highway department and the department of conservation and development have prepared, respectively, comprehensive highway and State forest-park plans. Special authorities, notably the New York Port Authority, the South Jersey Port Commission, and the joint bridge com-

STATE LAW ENACTED MAY 7, 1934 (CH. 178)

missions have been created to deal with localized problems of transportation.

Nine counties in northern New Jersey fall within the area covered in the study made by the regional plan of New York and its environs. Much of the remainder of the State comes within the area covered by the studies of the Philadelphia Tri-State District Plan.

Mercer County, which is the northernmost county of the Philadelphia Tri-State district, adjoins the area of the New York regional plan. A very detailed report of the planing studies of the Mercer County planning commission was published in 1931.

The State government, prior to the appointment of the State planning board, was thus relatively well equipped with various data, but no attempts had been made to bring such material together.

Duties and Functions

The State planning act of 1934 prescribed the following general duties and functions: To prepare and keep up to date a State master plan for the physical development of the State, and prepare and keep current a proposed long-term development program of major State improvements; to assist all State departments, local governmental agencies, and private individuals in coordinating all physical development plans; make studies of rural land utilization; collect and publish information relating to the proper development of the State and the conservation of its natural resources; and to consider and make its recommendations on all construction projects and proposals to acquire land except for projects legislated prior to creation of the State planning board, which are sponsored by State agencies and which affect the State master plan.

Funds and Appropriations

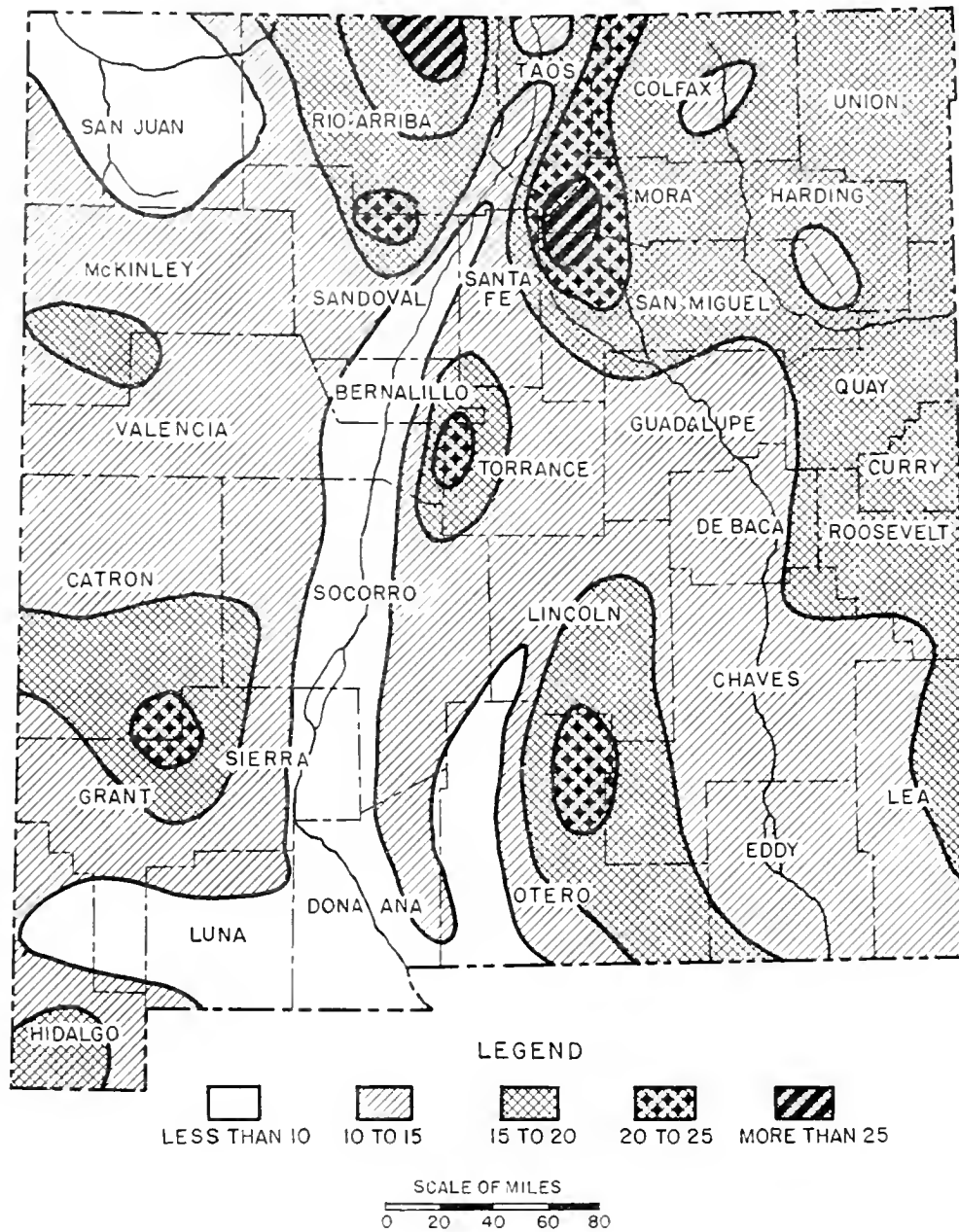
Prior to the enactment of the State planning law, a small allotment of State funds was made available to the temporary planning board. After the board was legally established, however, \$10,000 was appropriated by the legislature for operating expenses until July 1, 1935. A further appropriation of \$10,000 plus the unexpended balance of last year's appropriation has been made available to the board for the year 1935-36.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The immediate objectives of the temporary planning board appointed in February 1934, were (1) the organization of an effective office staff and (2) the creation and implementation of an official State planning board. With the establishment of the permanent planning board, the scope of the field of activities has been broadened to include the preparation of a State master plan for the physical development of the State and a long-term development program of State improvements.

The accomplishments of the board include the following: (1) The correlation and integration of data

already available from various State agencies and imitation of certain special surveys; (2) support of a State air mapping program; (3) assistance to Federal agencies in planning rural rehabilitation, land purchases, and in the programming of public works; (4) the stimulation of county and municipal planning through new legislation, and by the formulation of working procedures for the local planning boards; (5) a special field survey of the larger industries in the State; (6) assessed land valuation field studies.



NEW MEXICO
STATE PLANNING BOARD
AVERAGE ANNUAL PRECIPITATION TO CLOSE OF 1928

NEW MEXICO

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JULY 1, 1934

Organization and Staff

The first State planning board in New Mexico was appointed by Gov. A. W. Hockenhull on July 1, 1934, and consisted of the following members: G. C. Macey, State highway engineer, chairman; George M. Neel, State public works engineer, vice chairman; Frank Vesely, State land commission, vice chairman; Elliot Barker, State fish and game commissioner, secretary; Frank C. W. Pooler, regional forester; Dr. J. R. Earp, director, State bureau of health; Thomas McClure, State engineer; C. E. Faris, United States Indian schools; Dr. J. F. Zimmerman, president of the University of New Mexico; Dr. H. L. Kent, president of the State agricultural college; Dr. E. H. Wells, president of the State school of mines; J. S. Candelario; F. B. Jones; Lem White; Lee Evans, Ross Malone; T. W. Conway, and Roy Hall.

The National Resources Board assigned S. R. DeBoer to the State board as planning consultant. Later, Ralph Charles was assigned as land planning consultant. A staff of assistants was provided by the State emergency relief administration and placed under the direction of Capt. Kean Griffith.

The State planning act provided for a board consisting of nine ex-officio members, who at present are: Frank Vesely, State land commissioner, chairman; J. F. Conroy, State highway engineer, vice chairman; Thomas McClure, State engineer, secretary; Dr. J. R. Earp, director, State bureau of health; Charles Roehl, State commissioner of parks; Elliot Barker, State fish and game commissioner; Dr. J. F. Zimmerman, pres-

LAW ENACTED FEBRUARY 28, 1935 (CH. 137)

ident, University of New Mexico; Dr. H. L. Kent, president, State agricultural college; Dr. E. H. Wells, president, State school of mines. An advisory committee may be added to this body.

Duties and Functions

The bill creating an ex-officio board became law on February 28, 1935, upon the signature of Gov. Clyde Tingle. The chief duties of the board are:

To make and adopt an official State master plan of development.

To confer and cooperate with all departments of the State relative to the authorizing, locating, planning, laying out, acquiring or constructing of any public building, structure, highway, park, reservation, or other public improvements.

To make studies and reports of any planning problems of the State, upon the request of the board of county commissioners.

In general, to exercise such powers and functions as may be appropriate to promote State planning and coordination, and to carry out the purposes of the Act.

Funds and Appropriations

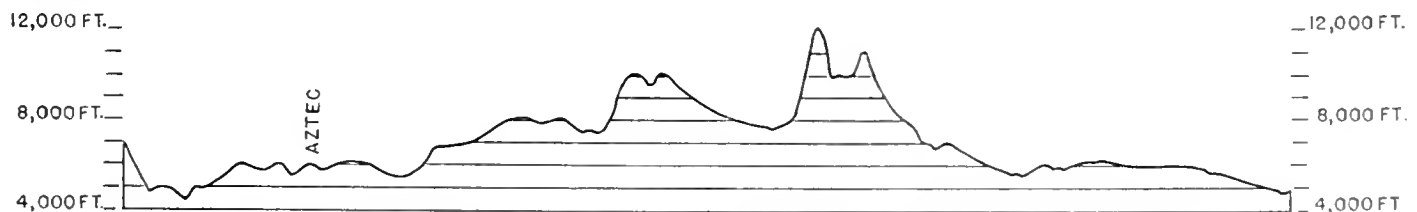
The 1935 State planning act provided \$350 for the 4 months remaining in the fiscal year, and \$1,000 for each of the two succeeding fiscal years. The work of the board has been greatly facilitated by the generosity of the State emergency relief administration in furnishing personnel and certain office equipment.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Preliminary studies clearly reveal that State planning in New Mexico must be adapted to the physiographic, social, economic, and political factors characteristic of the State, such as: Its high average altitude; its great need for control of water resources; the large percentage of the total area which is in public domain, or Federally owned; its potentialities as a recreation area; the presence in the State of three distinct racial groups, Native Indians, Spanish-Americans, and Anglo-Americans; its large mineral deposits, and, last, potential cheap power production from both hydro-electric and coal-steam plants.

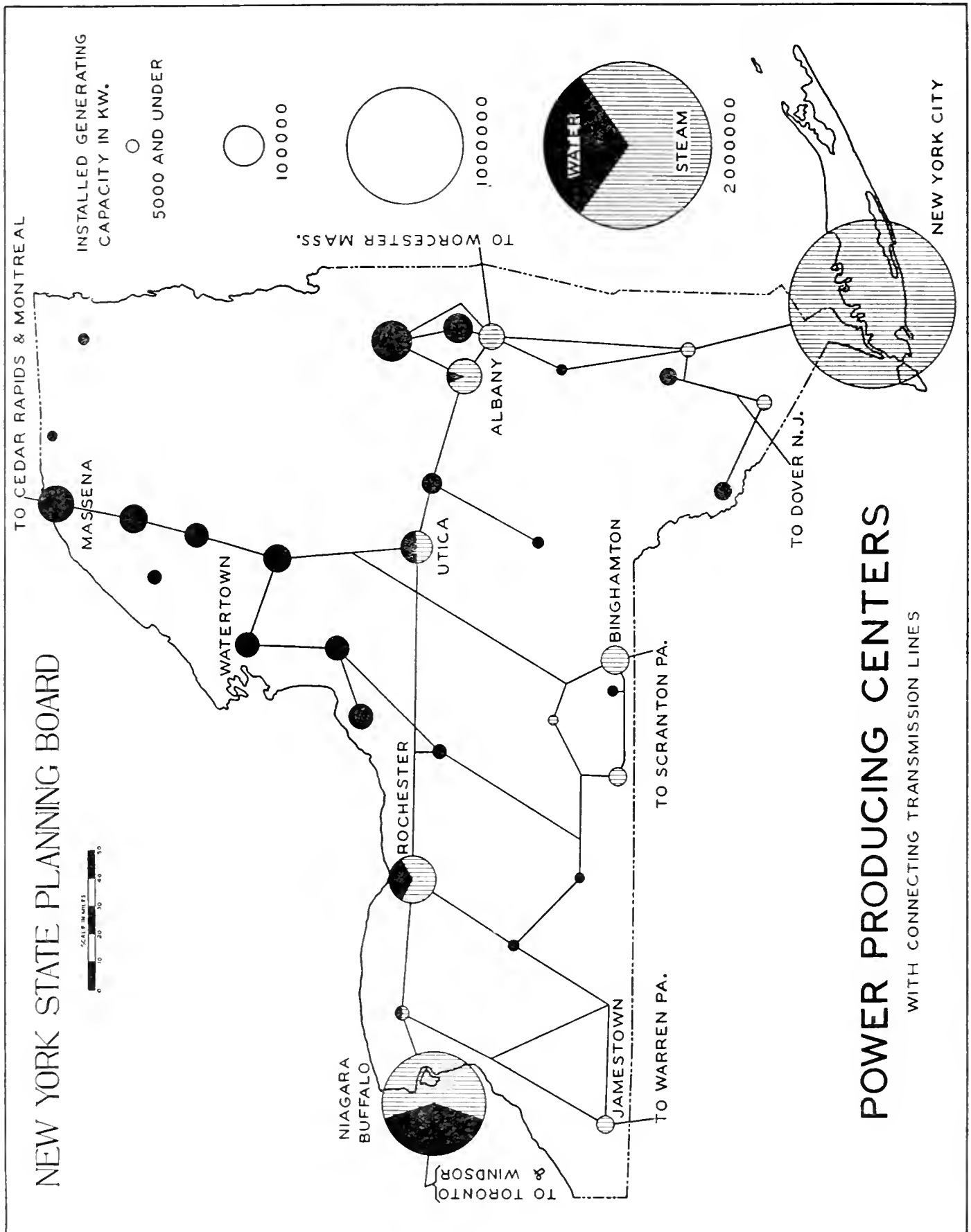
Obviously, the greatest problem in the State is that of land use, and particularly the use of federally owned

lands which constitute a large percentage of the State's area. At a meeting held May 29, 1935, a land use committee was named, consisting of the following members: C. M. Botts, chairman, Southwestern Conservation League; Oliver M. Lee, New Mexico Cattle Growers Association; Floyd W. Lee, New Mexico Wool Growers Association; W. A. Losey, New Mexico Game Protective Association; Elliott S. Barker, New Mexico State Game and Fish Warden; Frank Vesely, New Mexico Commissioner of Public Lands; John D. Clark, University of New Mexico; Representative of New Mexico College of Agriculture and Mechanic Arts; F. C. W. Pooler, Department of Agriculture; and A. D. Moholon, Department of the Interior.



SECTION THROUGH THE STATE OF NEW MEXICO ON LATITUDE 36°-50'

Prepared in the office of the National Planning Board.



NEW YORK

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED MARCH 8, 1934

Organization and Staff

In response to the National Planning Board's offer of cooperation and advice, Gov. Herbert H. Lehman appointed on March 8, 1934, the New York State Planning Board of 22 members. Dr. A. R. Mann, provost of Cornell University, is chairman. The members of the executive committee are: Ernest R. Clark; Fred J. Freestone, master New York State Grange; Frederick Stuart Greene, superintendent of public works; George McAneny, president Regional Plan Association of New York; Lithgow Osborne, conservation commissioner; Charles L. Raper, dean, college of business administration, Syracuse University; and Abraham S. Weber, director of the budget. The other members of the board are: Platt J. Wiggins, Henry F. Lutz, Thomas Parran, Jr., Eugene Kinckle Jones, Mrs. George M. Tyler, Theodosia Burr, David M. Bressler, Louis L. Berger, Herbert Bayard Swope, Andrew P. Hartmann, David F. Lee, James H. Mackin, Frank P. Graves, and James S. Thomas.

The National Planning Board assigned Robert Whitten as consultant to the board. Later Charles N. Lane was assigned by the National Resources Board as land planning consultant. In October 1934, Edward McKernon was assigned as associate consultant, and Harold M. Lewis, as an additional consultant, in January 1935.

Background and Citizen Support

Regional and State planning was not new in New York. In 1919 Charles D. Norton, one of the sponsors of the plan of Chicago, proposed the regional plan of New York and its environs which was completed in 1929. Since 1929, the work has been continued by the Regional Plan Association. This plan, extending into Connecticut and New Jersey, covers a metropolitan area of about 5,500 square miles. Other examples of regional planning in the State of New York are those

LAW ENACTED APRIL 5, 1935 (CH. 304)

which have been carried on for several years by the Niagara Frontier, and the Monroe County Planning Associations.

Among the many prominent citizens and officials who have in past years supported conservation of the State's human and natural resources, mention must be made of United States Senator Royal S. Copeland, noted for his particular interest in public health and forestation; former Gov. Alfred E. Smith, under whose leadership the famous State housing report of 1925 was made; and President Franklin D. Roosevelt who, as governor of New York, sponsored many measures relative to planning and conservation.

Duties and Functions

Pursuant to its general instructions to plan for the better utilization of the State's resources, on January 14, 1935, the planning board submitted a summary report of progress to Governor Lehman.

In March 1935, Governor Lehman, in a special message to the legislature, recommended establishing a permanent State planning council having the same general planning functions as the board appointed by him. A bill, approved by the board and by the Governor, was passed by the legislature and signed by the Governor on April 5, 1935.

Funds and Appropriations

The work of the temporary planning board progressed without direct expense to the State. Assistance and facilities were contributed by various State departments. The planning studies were approved as work relief projects by the emergency relief administration. Also, a special grant for expenses was obtained from the Spelman fund. The act creating the State planning council provides an initial annual appropriation of \$40,000.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The principal recommendations in the planning board's summary report of progress of January 14 are:

(1) At least 4,500,000 acres of the submarginal lands should be acquired gradually by the State for reforestation, game, and wildlife protection, watershed protection, and public recreation.

(2) The State's reforestation program should be supplemented by the purchase and management of a fair proportion of existing forest areas outside of the forest preserves. The State should acquire about three-fourths of the land within the Adirondack and Catskill Parks.

(3) In the upland headwater areas, a complete system of reservoirs should be planned and a proportion of the land maintained as public forest reservations.

(4) Altogether, an enlarged public domain of some 9 million acres should be created. This area would be three times as large as the present State holdings, and would comprise more than one-fourth of the total land area of the State.

(5) Further legislation to eliminate stream pollution should be enacted.

(6) A study should be made of the opportunities for economical construction of a number of artificial lakes.

(7) The State's present ownership in lands under water and in the foreshore should be conserved so that the limited public opportunities for access to rivers, lakes, and the seashore may be enlarged.

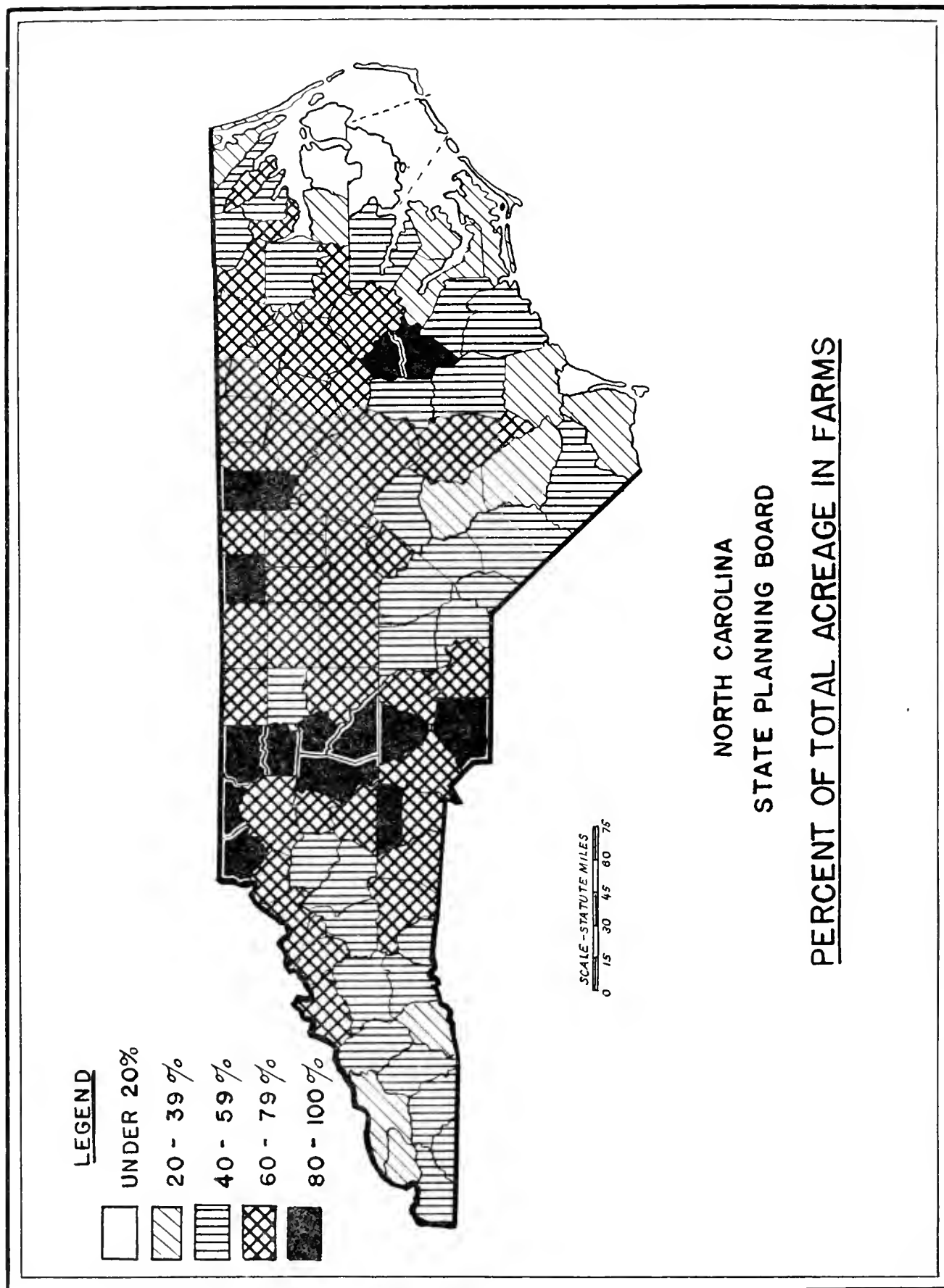
(8) Hunting and fishing preserves should be created and developed to secure adequate protection of wildlife.

(9) Present legislation authorizing county planning should be strengthened, and counties should be granted broad zoning powers.

(10) The State should regulate service stations, billboards, and other structures along its highways, to preserve the beauty of the countryside and to increase highway efficiency and safety.

(11) The reduction of public-works financing costs by a more general application of the pay-as-you-go method.

In February 1935 a works committee was organized to cooperate with the State engineer of the Public Works Administration in preparing a public-works inventory for the State of New York.



NORTH CAROLINA STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 1935

LAW ENACTED MAY 11, 1935

Organization and Staff

In response to the offer of assistance by the National Resources Board, Gov. J. C. B. Ehringhaus appointed a North Carolina State Planning Board in January 1935, composed of: Capus M. Waynick, State highway and public works commission, chairman; Clyde A. Erwin, superintendent of public instruction; R. Bruce Etheridge, director of the department of conservation and development; Mrs. W. T. Bost, commissioner of public welfare; H. W. Odum, University of North Carolina; Col. J. W. Harrelson, dean of administration, State College of Agriculture and Engineering; Dr. Clarence Poe, editor of the *Progressive Farmer*; Reuben Robertson, industrialist, Asheville, and Stanley Winborne, chairman of the utilities commission.

Background and Citizen Support

In many ways, the advent of State planning in North Carolina comes at a fortunate time. Throughout most its history the State has been largely rural and agricultural, but during the last few decades industrialization has been proceeding apace. The organic changes occasioned by this have demanded new ways of thinking and acting. Two major movements have emerged: (1) Village planning and (2) the activity of the institute for research in social science at the University of North Carolina.

Village planning in North Carolina has taken two forms. First, the promotion by private citizens of farm villages. These represent an attempt to bring about improved rural living conditions through clustered hamlets of farm homes with the farms themselves

arranged radially about them. Second, the designing and construction of industrial villages to serve the cotton textile workers. These have been developed by the textile-mill operators, who have found it necessary to provide housing in a nascent industrial region, the workers themselves being unable to provide such facilities.

The activities of the institute cover a wide variety of research and investigation in the field of social science. These include an examination of trends, influences, and forces in North Carolina, studies in human geography and industry, and a formulation of aims and objectives in social and economic planning. The onslaught of a new industrial order in the State has awakened a desire to preserve many of the old social values whose passing is threatened. As a consequence, scholars such as H. W. Odum, T. J. Woofter, and R. B. Vance and others have striven to create a regional consciousness and pride in the hope of its ultimate expression in planning for the preservation and emphasis of the area's unique qualities.

These facts, however, relate primarily to eastern North Carolina. The western part of the State lies within the realm of the Tennessee Valley Authority. The social problem of the southern Appalachian Mountains, the National Forest of the Great Smokies, and the development of forest and water-power resources of western North Carolina are essentially tied up with the larger program of that authority. North Carolinian agencies have, therefore, rendered many important services to the T. V. A. and, as State planning gets under way, such interchange must necessarily grow in volume and significance.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Due to the newness of the board, most of its energies have so far been devoted to preliminary organization problems and to formulating a working philosophy. To guide the work of the 10 committees which were organized, the following points of policy have been agreed upon:

(1) Other things being equal, the planning board is eager to encourage projects which, being very much needed in the State, also constitute valuable units in the program of national reconstruction.

(2) Relative permanence and broad social value are two important criteria for judging projects; the board

intends to give priority to those which seem to contribute to the wealth, values, and general welfare of the State.

(3) The board intends to place special emphasis on the problem of reintegration of agrarian culture, to which end it will lend its support to three major projects: Rural electrification, soil erosion service, and rural rehabilitation programs. Each of these constitutes a major plank in the national program, and each will contribute materially to increase of values, increase of income, and increase of standards of living in rural North Carolina.

NORTH DAKOTA STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 27, 1934

Organization and Staff

The North Dakota State Planning Board, now an established organization, had a precursor in the State advisory board appointed on February 27, 1934 by former Gov. William Langer and consisting of: Hon. Robert Byrne, secretary of state, chairman; Prof. Howard Simpson, University of North Dakota, Grand Forks; Dean H. L. Walster, agricultural college, Fargo; R. M. Stangler, manager, Bank of North Dakota, Bismarck; I. A. Aacker, Bismarck; Walter Maddock, Farmers Union Terminal Association, Bismarck; M. O. Ryan, secretary, Greater North Dakota Association, Fargo; E. A. Willson, F. E. R. A. administrator, Bismarck.

On February 18, 1935, Gov. Walter Welford appointed the present board under the provisions of the State planning act of 1935. The members of the present statutory board are: J. P. Cain, lawyer, Dickinson, chairman; E. D. Lum, newspaper publisher, Wahpeton; H. M. Pippin, merchant, Halliday; Fred Vosper, farmer, Neche; E. A. Willson, F. E. R. A. State administrator, Bismarck; Prof. F. E. Cobb, president State School of Forestry, Bottineau, who has been succeeded by L. S. Matthew, acting State forester, Bottineau; Prof. L. C. Harrington, dean of the College of Engineering, University of North Dakota, Grand Forks; Dr. H. E. Simpson, State geologist, University of North Dakota, Grand Forks; Dr. H. L. Walster, dean and director of agriculture extension, State agricultural college, Fargo; M. O. Ryan, secretary of the Greater North Dakota Association, who was elected executive director. The planning consultant, Irvin Lavine, professor and head of the department of chemical engineering, University of North Dakota, was assigned December 20, 1934, by the National Resources Board, which also assigned C. H. Plath of the State agricultural college, as land planning consultant.

Background and Citizen Support

Nearly 60 percent of the population of North Dakota reside on farms. An additional 25 percent of the people reside in rural nonfarm areas embracing towns and villages of less than 2,500 population. Only 12 cities of over 2,500 population are found in the State. Thus the problems of the State have been primarily related to the agricultural industries. Although a few of the larger cities early established zoning ordinances, very little attention was paid to large-scale

LAW ENACTED MARCH 8, 1935 (CH. 217)

planning. During periods of agricultural prosperity the rural sections of the State saw little need for any program related to long-range planning, but during the past years of economic depression and drought there has come the realization that planning is an essential factor in sound government. Several civic organizations throughout the State began active campaigns in the early part of 1934 to educate the people to the necessity and value of planning, and the creation of the State planning board further stimulated public interest.

Duties and Functions

Senate bill 149, approved by the Governor on March 8, 1935, sets up the State planning board with these powers and duties: (1) To make inquiries * * * concerning the resources of * * * the State; (2) to make surveys of rural land utilization, with a view to land classification; (3) to formulate plans for the conservation of resources and development, and upon the basis of which to make recommendations; (4) to cooperate with the United States and any of its agencies in the planning and in the administration of its public works programs; to act as an agency of the United States in carrying out any Federal development project and to use any funds provided for such purposes; (5) to cooperate with the State planning boards of other States, and with local planning boards within the State; (6) to aid in the organization of regional planning boards; (7) to exercise such additional powers as may be necessary to promote State planning.

Funds and Appropriations

Due mainly to the distressed financial condition of the State, and in some measure also to political upheavals within it, the early meetings of the board were held too infrequently for maximum accomplishment. During the early months of the board's existence the Greater North Dakota Association provided the traveling expenses for members attending meetings. With the appointment of a consultant by the National Resources Board, more active operation began. The State emergency relief administration provided a staff of seven engineers and statisticians, making an appropriation of \$2,500 for this purpose. The university supplied quarters, office equipment, etc. The act creating the board provided for an appropriation of \$25,000 for the biennium, and this amount became available on March 18, 1935.

ACCOMPLISHMENTS AND RECOMMENDATIONS

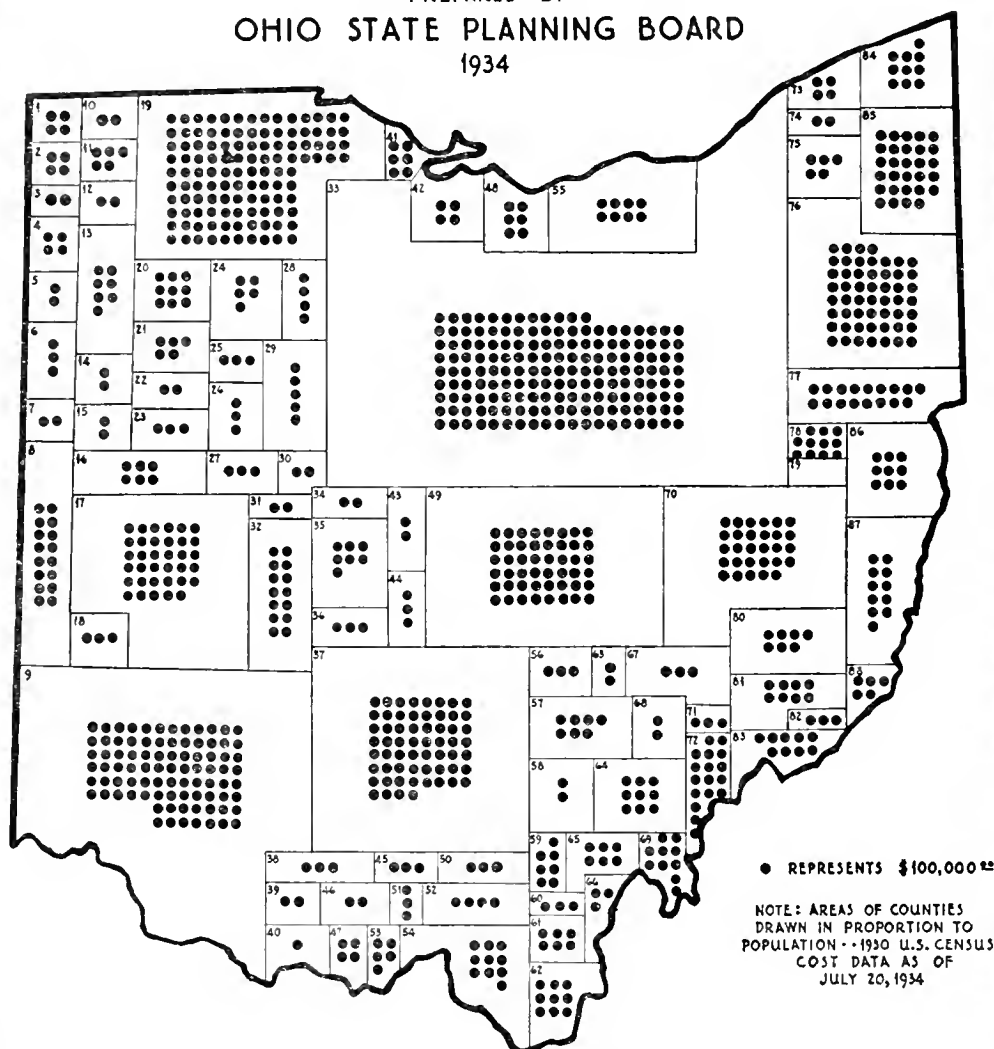
Many State-wide surveys and researches have been undertaken by the board, and by various State, county, and municipal agencies under its supervision and with its aid. All of these have been coordinated through the consultant's office and the preliminary fact-findings were collected, organized, analyzed, and articulated into a preliminary progress report submitted on April 10, 1935, to the National Resources Board. Studies now being undertaken with the view of aiding administrative agencies include: Water conservation, mineral resources, land classification, transportation, stream

pollution and sewage disposal, population (groups densities and trends), poverty, unemployment and relief loads in counties of the State, banking, taxation, and development of a 10-year public-works program.

North Dakota has become thoroughly interested in State planning, and the activities of the board have received a great deal of publicity. The State government has established the planning board upon a basis such that its planning recommendations carry weight and will influence the State's development, and has assured the board of its full support.

X-7

COMPARISON BY COUNTIES
BETWEEN
C.W.A. PUBLIC WORKS EXPENDITURES
AND
POPULATION
STATE OF OHIO
PREPARED BY
OHIO STATE PLANNING BOARD
1934



1 • WILLIAMS
2 • DEFIANCE
3 • PAULDING
4 • VAN WERT
5 • MERCER
6 • DARKE
7 • PREBLE
8 • BUTLER
9 • HAMILTON
10 • FULTON
11 • HENRY
12 • PUTNAM
13 • ALLEN
14 • AUGLAIZE
15 • SHELBY
16 • MIAMI
17 • MONTGOMERY
18 • WARREN

19 • LUCAS
20 • WOOD
21 • HANCOCK
22 • HARDIN
23 • LOGAN
24 • SENECA
25 • WYANDOT
26 • CRAWFORD
27 • CHAMPAIGN
28 • HURON
29 • RICHLAND
30 • UNION
31 • MADISON
32 • CLARK
33 • CUYAHOGA
34 • MORROW
35 • MARION
36 • DELAWARE

37 • FRANKLIN
38 • GREENE
39 • CLINTON
40 • CLERMONT
41 • OTTAWA
42 • SANDUSKY
43 • MEDINA
44 • ASHLAND
45 • FAYETTE
46 • NIGHLAND
47 • BROWN
48 • ERIE
49 • SUMMIT
50 • PICKAWAY
51 • PIKE
52 • ROSS
53 • ADAMS
54 • SCIOTO

55 • LORAIN
56 • KNOX
57 • LICKING
58 • FAIRFIELD
59 • HOCKING
60 • VINTON
61 • JACKSON
62 • LAWRENCE
63 • HOLMES
64 • MUSKINGUM
65 • PERRY
66 • GALLIA
67 • WAYNE
68 • COSHOCTON
69 • MEIGS
70 • STARK
71 • MORGAN
72 • ATHENS

73 • LAKE
74 • GEauga
75 • PORTAGE
76 • MAHONING
77 • COLUMBIANA
78 • CARROLL
79 • HARRISON
80 • TUSCARAWAS
81 • GUERNSEY
82 • NOBLE
83 • WASHINGTON
84 • ASHTABULA
85 • TRUMBULL
86 • JEFFERSON
87 • DELMONT
88 • MONROE

BASE MAP BY STATE DEPT. OF HEALTH
SOURCE OF DATA:
RECORDS OF C.W.A.

OHIO

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 1, 1934

Organization and Staff

In response to the National Planning Board's offer of cooperation and advice, former Gov. George White, on February 5, 1934, appointed the Ohio State planning board, composed of: Dean Walter J. Shepard, Ohio State University, chairman; R. B. Ackerman; Alfred Bettman, chairman of the planning commission of the city of Cincinnati and district chairman of the National Resources Board; T. S. Brindle, director of the State department of public works; J. R. Burkey, chief engineer, bureau of bridges, State department of highways; Dr. J. I. Falconer, professor of rural economics, Ohio State University; President Philip C. Nash, University of Toledo; W. H. Reinhart, State conservation commissioner; J. P. Schooley, State architect; and F. H. Waring, chief engineer, State department of health.

L. Segoe, consulting engineer and city planner, was assigned by the National Planning Board as consultant, and Rufus E. Miles, executive director of the Ohio Institute, was likewise assigned as associate consultant. Richard H. Baker was later assigned by the National Resources Board as land planning consultant. Kyle W. Armstrong was selected as chief of the technical staff.

Background and Citizen Support

Planning, as an instrument for sound community development, has long been recognized and widely practiced in Ohio. Of the State's 172 cities and villages of 2,500 population or more, 85 have official planning commissions, and represent 88 percent of the State's urban population. Together with the four counties having county planning commissions, the population living under jurisdiction of official planning commissions amounts to 63 percent of the total population of the State. Interest in planning is further illustrated by the existence and work of an active State-wide citizens'

WILL AGAIN SUBMIT BILL TO LEGISLATURE

organization founded in 1920, the Ohio State conference on city planning, renamed in 1932 the "Ohio State Planning Conference" in recognition of the broadening field of planning activities in the State.

Duties and Functions

As stated in the enabling act introduced in the legislature, and prepared by the board, the State planning board is to make a * * * "general State plan which * * * shall show the board's recommendation for the development of the State. It may include * * * the general location, character and extent of public ways, grounds, utilities, buildings and works; also land utilization program including the general classification and allocation of the land within the State for suitable uses and purposes, such as agriculture, forestry, recreation, industry, urbanization, conservation of soil, water and minerals. * * * The State planning board may confer and cooperate with Federal agencies or with interstate or regional authorities or with the authorities of neighboring States for the purpose of bringing about coordination between the development of the Nation and neighboring regions, States, counties and municipalities and the development of the State of Ohio. The board shall advise and cooperate with planning agencies and other public authorities within the State for the purpose of promoting coordination between State and local plans and development. * * *."

Funds and Appropriations

The State relief administration has from the beginning aided and supported the State planning board. Since about May 1, 1934, the State relief administration has been providing the personnel for the board's staff, with a total pay roll averaging \$1,600 per month. Loans of service and equipment from State agencies average about \$300 additional monthly.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The Governor's board recognized from the beginning its duty to assist through studies and counsel the various emergency agencies, Federal, State, and local, without, however, neglecting its primary duty of formulating a long-range, basic plan of State development.

The board devoted the first 6 months to making an inventory of the resources, facilities, and social and economic conditions in the State.

It recently completed a series of studies of immediate importance to such administrative agencies. The chief of these are:

(1) Recommendations for submarginal land purchase demonstration units, and studies and reports on such projects submitted to the regional director of the A. A. A. land-policy section by various agencies and individuals.

(2) Studies of land purchase proposals for recreational and conservational purposes.

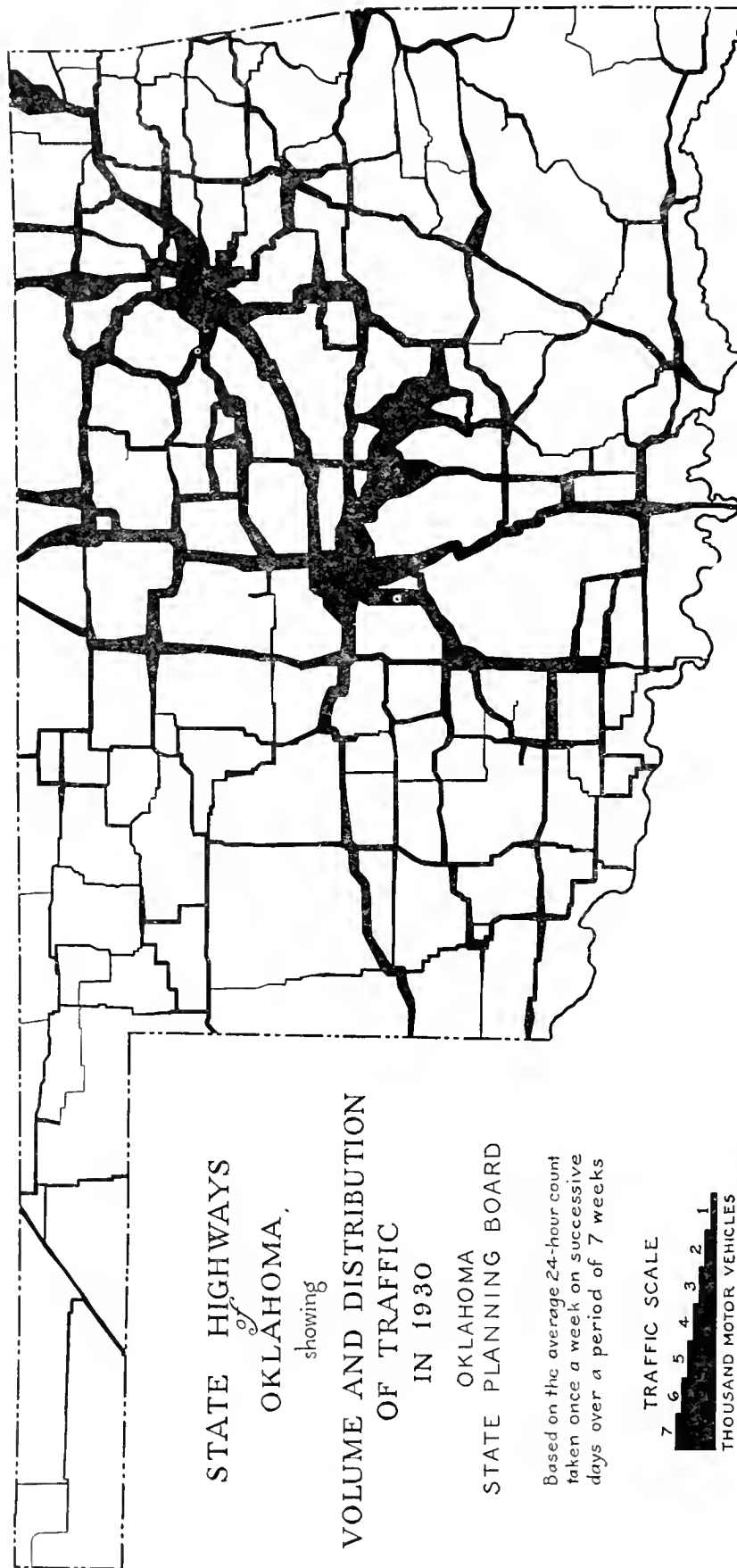
(3) An investigation and report on minimum-flow requirements, in connection with the proposed Scioto-Sandusky flood control water conservation project.

(4) A comprehensive study of the State administrative departments in control of recreational and conservational activities, looking toward their organization.

(5) An analytical study, in cooperation with the State E. R. A. of the extent and characteristics of the unemployed employables in the State.

(6) A State-wide rural electrification survey, in cooperation with the State E. R. A.

(7) The taking, compilation and review of the National Inventory of Works Projects, in cooperation with the State public works administration engineer.



OKLAHOMA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 17, 1934

LAW ENACTED APRIL 30, 1935 (CH. 24)

Organization and Staff

Acting upon the suggestion of the National Planning Board, Gov. William H. Murray on January 17, 1934, appointed the first Oklahoma State Planning Board as an unofficial agency consisting of the following members: Ed McDonald, chairman; H. A. Hatcher; Dr. G. N. Bilby; Jerome Dowd; Dr. R. E. Kirkham; Leon B. Senter; Fred Tucker; Judge Edgar S. Vaught; and Judge R. L. Williams.

Cooperating with the board were Vincent M. Miles, Fort Smith, Ark., chairman planning district VI, National Resources Board; Earl O. Mills, St. Louis, Mo., consultant; and J. W. Klinglesmith, resident engineer with the Oklahoma Highway Commission.

The act creating a permanent State planning board, which was approved by Gov. E. W. Marland, April 30, 1935, provided for a board of seven members. On May 4, 1935, the following members were appointed: Governor Marland, chairman; Leonard Logan, vice chairman; Scott Ferris, chairman of Oklahoma Highway Commission; Sam Battles, chairman of conservation commission; Lea M. Nichols, chairman of State board of affairs; Sam Sorrels, and J. V. McClintic.

At the request of the Oklahoma board, the National Resources Board reassigned Earl O. Mills as State planning consultant, and assigned Ben G. Duncan as land planning consultant.

Background and Citizen Support

Since the settlement of the Indian Territory by the Five Civilized Tribes nearly a century ago, and since the opening of Oklahoma Territory, April 22, 1889, by President Harrison's proclamation, problems pertaining to land, water, and mineral resources have naturally been of vital economic interest to the people of Oklahoma. In 1932 Oklahoma ranked fourth in value of

mineral production, having risen from a ranking of twenty-fifth in 1901. In the few months that it has been in operation, the Oklahoma State Planning Board has found universal public favor.

Duties and Functions

The duties and functions of the board as defined by the State planning act of 1935 may be summarized briefly as follows:

1. To adopt an official State plan for the physical development of the State.
2. To prepare and keep to date a long-term coordinated program of public improvement projects.
3. To confer and cooperate with the authorities of neighboring States for the purpose of bringing about a coordination of planning in this region.
4. To cooperate with the subdivisions of the State for the purpose of bringing about a coordinated State plan.
5. To promote public interest and understanding of the State plan and the problems of State planning.
6. Upon request of the board the Governor may assign to the board members of the staffs or personnel of any State administrative department or institution, or he may direct any department or institution to make for the board special surveys and studies.

Funds and Appropriations

During the early months of the board's existence, it was severely handicapped by its inability to obtain funds from either the State emergency relief administration or the various State agencies. Since May 1935 the E. R. A. has been entirely willing to contribute personnel from the relief rolls, but properly trained workers are not available as yet.

In the act creating the planning board, the legislature appropriated \$100,000 for its use. This appropriation was made available immediately and was used for the remainder of the fiscal year ending June 30, 1935, and for the following biennium.

ACCOMPLISHMENTS AND RECOMMENDATIONS

On September 7, 1934, the Oklahoma State Planning Board submitted its preliminary report to the National Resources Board. On the basis of information contributed by various State departments and educational institutions, the board made three recommendations, as a part of the report, all of which either have been or are being carried out:

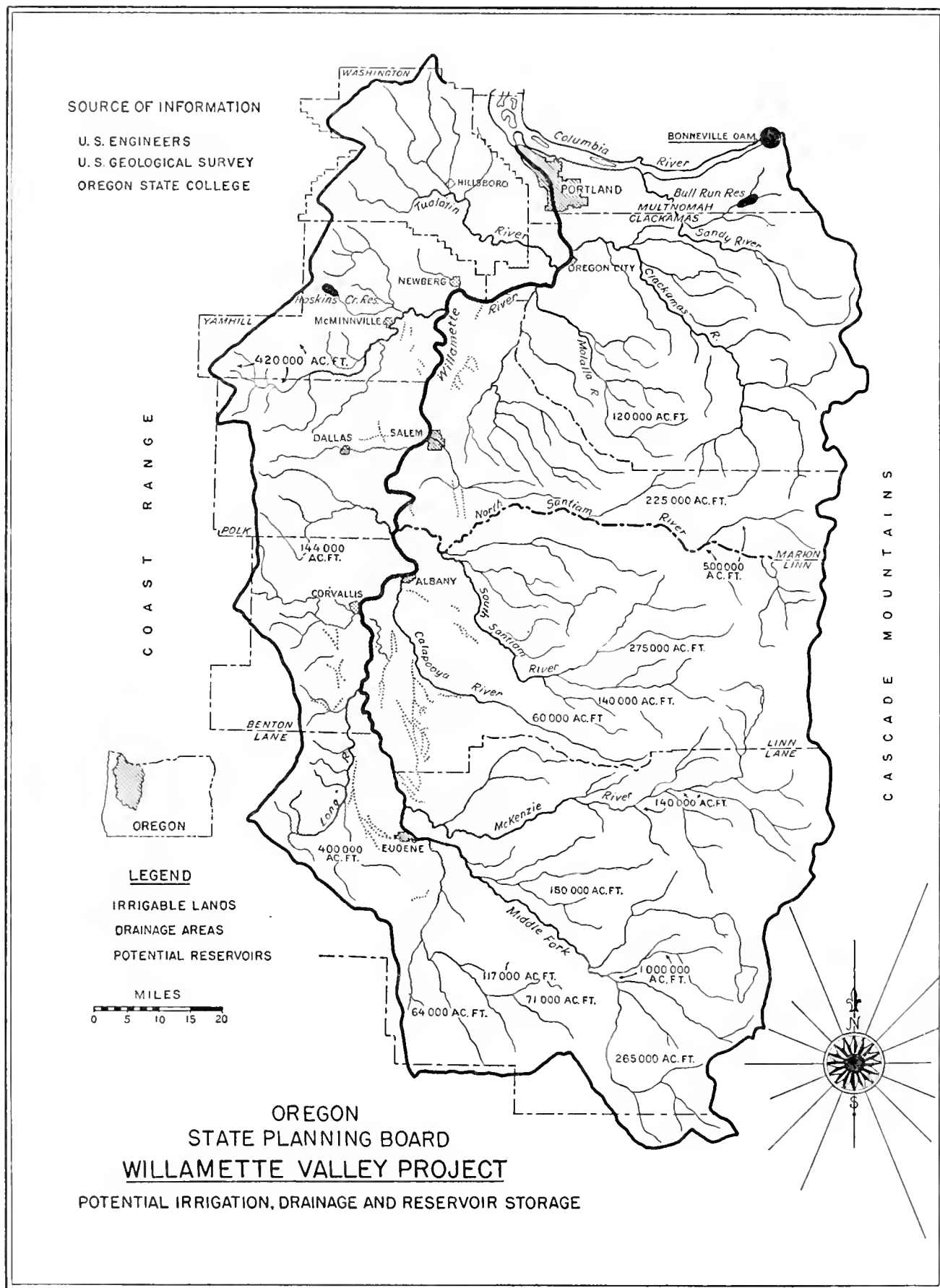
1. Planning work should continue under the direction of the planning consultant furnished by the National Resources Committee.
2. The Oklahoma State Planning Board should be established on a statutory basis.
3. Special attention should be directed toward such studies as land uses and the regulation of submarginal lands; highways; rail and bus transportation; rural industrial development in conjunction with subsistence homesteads; school locations; parks and public works.

Since the board has been operating as a statutory agency only since May 4, most of its time thus far

has been devoted to perfecting an organization and outlining a program. A committee composed of representatives from Federal agencies and the State planning board has been organized to assist in coordinating the work of the Federal and State agencies. The technical staff of the board is now engaged in making a study of county relief loads to use as a basis for future allocation of work relief money.

A new base map is being made, and the technical staff also is assembling a library of material which will assist in dealing with emergency problems and will later be valuable in long-term planning.

The board has set up an architectural division, which is at work studying the possibilities for construction of 7 of the 9 State institution dormitories authorized by the last legislature. Four other State institutions have been visited and studies for the development of the physical plans in each are being made.



From "Willamette Valley Project, Report of Oregon State Planning Board," May 8, 1935.

OREGON

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 1, 1935

Organization and Staff

The Oregon State Planning Council, an unofficial agency, was appointed in March 1934, by Gov. Julius Meier, in response to the National Planning Board's offer of cooperation. On February 1, 1935, a legislative act creating an official Oregon State Planning Board was signed by Gov. Charles H. Martin who appointed as the State planning board the unofficial planning committee which had previously submitted to him a preliminary program for the development of the State. The board is composed of D. C. Henny, consulting engineer, chairman; C. J. Buck, United States regional forester, vice chairman; Ormond R. Bean, Portland City commissioner, secretary; J. W. Biggs, lawyer; Guy Boyington, county judge; E. W. Miller, manager, Oregon Coast Highway Association; Jamieson Parker, architect; Dr. Philip A. Parsons, head of the department of sociology, University of Oregon; and Dean W. A. Schoenfeld, director, Oregon Agricultural Experiment Station. V. B. Stanbery, planning consultant to the voluntary Oregon Planning Council, was assigned as consultant by the National Resources Board, and was also appointed executive secretary. Mr. A. S. Burrier was later assigned as land planning consultant by the National Resources Board.

Background and Citizen Support

In 1911 a State forest code was passed creating a State board of forestry to conserve and protect forest and timberland. In 1925 an act was passed giving the State highway department authority to acquire, improve, and maintain land for park purposes. A 10-year wildlife conservation program was adopted by the Oregon State Game Commission in 1931. The development of these resources through the recommendations of the State planning board has become the official program of the new State administration under Governor Martin. Seven counties have recently petitioned the Governor to appoint unofficial county

LAW ENACTED FEBRUARY 1, 1935 (CH. 5)

planning commissions. An enabling act, authorizing county planning commissions, did not pass at the last legislative session, but in view of the changing public sentiment will doubtless pass when again introduced.

Twenty-six city planning commissions have been formed under the Oregon laws of 1919. The 1932 report by Harland Bartholomew for the city of Portland is perhaps the outstanding example of city planning in Oregon.

Duties and Functions

The State planning board is a research, advisory, and coordinating agency. The State planning board act states that it shall be the duty of the board: To recommend to the Governor comprehensive plans for the utilization, conservation, and development of the natural resources of the State; conduct investigations, surveys, and research, and, from data obtained thereby, recommend to the Governor a balanced program of projects for public improvements; cooperate with the Federal, State, and regional agencies; at the request of the Governor or the legislature, conduct investigations, surveys, and research upon any subject, and submit reports and recommendations on such subjects to the Governor or the legislature.

Funds and Appropriations

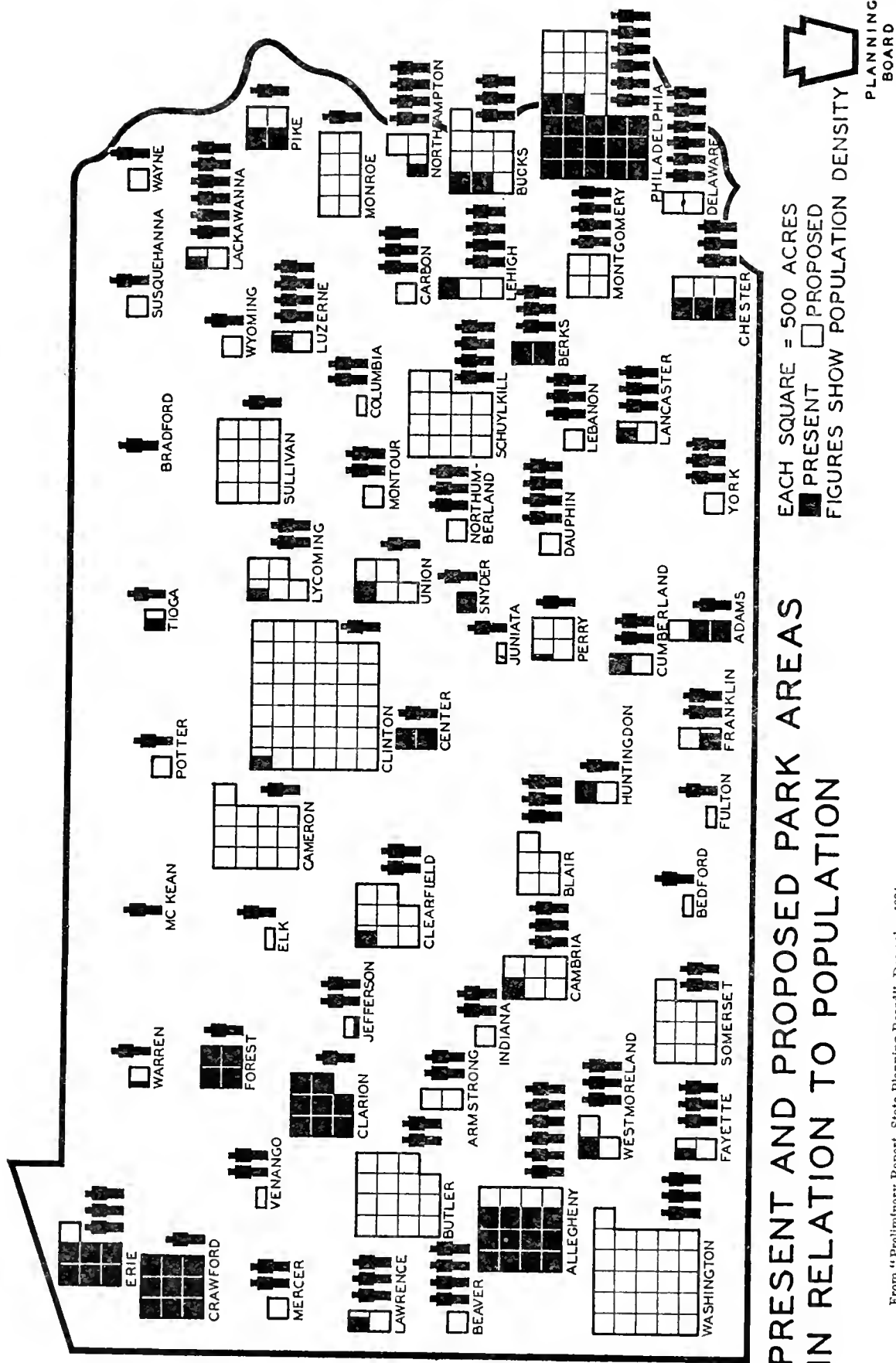
The State legislature appropriated \$30,000 for the use of the State planning board during the biennium, 1935-36. The board also received approximately \$16,000 from the former State reconstruction advisory board. The Oregon E. R. A. has furnished about \$5,000 in salaries for the staff and has indicated they will increase contributions during this year. Higher educational institutions have furnished much specialized assistance and are continuing this cooperation; State departments, institutions, and all Federal agencies are cooperating wholeheartedly with the State planning board by providing technical advice and special services.

ACCOMPLISHMENTS AND RECOMMENDATIONS

At the suggestion of Marshall N. Dana, the present chairman of district 11, National Resources Board, a voluntary Oregon Planning Council was formally organized in June 1934, with Dr. P. A. Parsons as general chairman, and with 19 committees, each covering a specific division of planning. This council now comprises over 300 members. On November 14, 1934, Governor-elect Martin appointed an unofficial planning committee which reviewed reports from 16 of these divisional committees. Recommendations taken therefrom for Federal and State legislation, appropriations, and administrative action to develop natural resources and promote the public welfare were sent to Governor Martin and the National Resources Board. Twenty-seven out of 33 legislative bills sponsored by the board were enacted.

The board assisted in the national inventory of works projects. Other projects now in progress are: A comprehensive research (in collaboration with interim com-

mittee of the State legislature) into State and local governmental organization with recommendations for reorganization and simplification of the State's governmental structure. A comprehensive study and outline for a coordinated program for the development of the Willamette River watershed. Investigation and consideration of the complex problems involved in the disposition of O. & C. reversioned grant lands and Federal purchases of public lands in eastern Oregon. A thorough study of Oregon's State highway system and future highway program. An inventory and investigation of all properties, institutions, buildings, and parks owned or controlled by the State, including estimated future needs, as a basis for a State public works program. A comprehensive plan for a new State capitol group at Salem. A survey for an industrial district near Portland in connection with Bonneville power. A study of Oregon's economic balance and trade position. Stimulation and assistance to local planning groups.



From "Preliminary Report, State Planning Board", December 1934.

PENNSYLVANIA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JULY 23, 1934

WILL AGAIN SUBMIT BILL TO LEGISLATURE

Organization and Staff

A State planning board for Pennsylvania, consisting of nine members, was appointed on July 23, 1934, by former Gov. Gifford Pinchot, who named as chairman, Lewis E. Staley, then secretary of forests and waters. This board, after submitting a preliminary report to the National Resources Board and to Governor Pinchot, went out of existence on January 15 upon the inauguration of George H. Earle as Governor. On March 9, Governor Earle appointed the following board: Ralph M. Bashore, secretary of forests and waters; Robert L. Johnson, executive director of the State emergency relief board; Warren Van Dyke, State secretary of highways; E. N. Jones, State secretary of labor and industry; Maj. Henry Hornbostel, Pittsburgh architect; C. C. Zantzinger, Philadelphia architect, and Col. Hale Steinman, Lancaster publisher. The National Resources Board assigned as consultants Dr. Alexander Fleisher of Churchville, Pa. (who also acted as director) and Robert Whitten of New York. F. A. Pitkin was appointed assistant director.

Planning board activities have been carried on since October 1934 as an emergency relief work division project. The staff numbers about 50 persons, including research and technical personnel, draftsmen and sociographers, with editorial, secretarial, and clerical divisions.

Background and Citizen Support

The desirability for planning for the needs of the people has long been recognized in Pennsylvania. It was first conceived as town planning, and restricted to local matters such as housing, transportation, recreation and zoning. Metropolitan area planning and county and regional planning were the obvious next steps. Many such groups exist in the commonwealth, of which the Philadelphia Tri-State regional plan and

the metropolitan planning activities of Allegheny County are admirable examples. The department of forests and waters, established in 1895, and later the greater Pennsylvania council did much to assist the advance of sound planning procedure in the State. The next step was the evolution of a State plan. For a limited period, beginning in 1931, there was the experiment of an unofficial State planning body.

With the encouragement of the National Resources Board, in 1934, the planning board was named by the Governor.

Duties and Functions

The duties and functions of the board, according to a bill to be reintroduced in the impending special session of the State legislature, are: To plan long-term and emergency programs of public works; to plan for the conservation and utilization of the resources of the commonwealth; to coordinate the plans of the various departments of the State government; to assist official and citizen-constituted planning groups and cooperate closely with the Federal Government.

Funds and Appropriations

The State emergency relief administration has from the beginning aided and supported the State planning board, providing personnel with a pay roll averaging \$5,500 a month.

A general State authority bill and a State housing authority bill have been drafted by the staff as companion measures to a planning board bill. Many other related bills are pending, some of them drafted by the Public Works Administration's legal staff at Washington.

Recommendations for legislation, made by the former board in the preliminary report, have been covered by bills introduced in the session of the general assembly just ended.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Since the publication of the preliminary report on January 1935, the planning board has been engaged in a number of enterprises, one of the most important of which has been cooperating with the P. W. A. State engineer in the national inventory of Public Works. Another activity has been that of cooperating with the National Park Service, A. A. A., Federal Land Program, etc., in the acquisition of submarginal farm land and development of recreational areas. Other activities have included: Assistance in the rural electrification program; a study of adult education; a survey of population trends; a study of bus and truck registration; completion of plans for a traffic survey as a basis for future highway development; an analysis of the need for additional landing fields; flood-control and soil-erosion studies; a study of the subsistence homestead problem.

The program upon which the staff is now working includes:

1. *Land use.* (a) Consolidation of land use information; Combining land use maps and data of State and Federal agencies;

refining the original determination of submarginal and problem areas; a field investigation in problem areas to determine the number of families involved, the number of deserted farms, occupation of formerly abandoned farms, relief status, etc. (b) Analysis of financial problems of civil divisions of problem areas; tax delinquency; excess of governmental units; possibility of savings in cost of roads, schools, etc., through combinations of governmental units; rural zoning.

2. *Water resources.* Analysis and correlation of data collected by water resources board of the department of forests and waters, Army engineer's reports; suggested Public Works Administration projects, etc.; flood control, stream pollution; water supply.

3. *Public works.* (a) Determination of priority through refinement of classification of projects, correlation with relief data, etc. (b) Continued follow-up of civil subdivisions not suggesting projects.

4. *Transportation.* Continued studies toward a coordinated system of transportation, both passenger and freight.

5. *Legislation.* Endeavors to secure legislation for continuation of State planning board and for effective cooperation with the Federal Government.

6. *Population.* Continued studies of population trends.

7. *Special activities.* Continuation of present cooperation with Federal agencies, such as the National Resources Board; development of recreational area program with the National Park Service, etc.

RHODE ISLAND

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED DECEMBER 7, 1934

Organization and Staff

Following an offer of cooperation from the National Resources Board, Gov. Theodore Francis Green on December 7, 1934, appointed the Rhode Island State Planning Board. Previously the State had been officially represented on the New England Regional Planning Commission by John H. Cady, of Providence, appointed by the Governor.

The State planning board, which elected John Nicholas Brown as chairman, consisted of the following members: Maj. John H. Caton, 3d, deputy State public works administration engineer; George H. Henderson, chief engineer, State board of public roads; Archie W. Hurford, associate State forester of the State department of agriculture; Albert J. Lamarre, commissioner of public works of Pawtucket; Charles B. MacKinney, member of the metropolitan park commission; John A. O'Brien, secretary of the State emergency public works commission; and Richard B. Watrous, secretary of the Providence Chamber of Commerce. John H. Cady was appointed consultant by the National Resources Board.

A bill creating a State planning board was prepared under the direction of the Governor's planning board. It was passed by the State legislature and was signed by Governor Green on March 21, 1935.

On April 24, 1935, Governor Green appointed the new State planning board which includes the following members: John Nicholas Brown, Providence, chairman; Richard B. Watrous, executive secretary; Maj. John H. Caton, 3d; Wallis E. Howe of Bristol, architect; John F. Lennon of Pawtucket, formerly a member of the metropolitan park commission; Frederick A. Young, chief of the State division of public utilities; Thomas J. H. Peirce, chief of the State division of forests, parks, and parkways; Walter F. Fontaine of Woonsocket, architect; and Howard L. Hitchcock of Narragansett.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Reports, map material, and general information pertaining to the State have been secured by the planning board from State departments, Federal agencies, municipalities, utility companies, and other sources.

A series of uniform scale maps for every town in the State is in preparation. A series of historical maps is also being made.

At the request of the National Resources Board, the State planning board, in cooperation with the State P. W. A. engineer, made a detailed inventory of needed public works in the State.

Following a survey, in cooperation with local agencies, of slum conditions in Providence, the planning board prepared detailed plans for a slum clearance project and a new housing development which was submitted as a self-liquidating project to the Public Works Administration.

LAW ENACTED MARCH 21, 1935

Background and Citizen Support

Public indifference in the past has permitted some of the streams and rivers of Rhode Island to become polluted, while slum districts have developed, forests have been neglected, and agricultural lands have deteriorated. The State abounds in natural beauty and advantages, but they have not been conserved or capitalized.

There is now a growing demand for conservation and development of the State's natural resources. Chambers of commerce, municipal planning and zoning boards, women's clubs, and schools and colleges are stimulating local and State improvements. New legislative measures and local ordinances are being enacted with the object of safeguarding the future development.

Duties and Functions

The State planning board is directed by the law of 1935: (1) To prepare a synopsis of planning work already accomplished in Rhode Island; (2) to prepare a series of "existing condition maps" of the State; (3) to analyze and coordinate the data disclosed by a survey of existing conditions within the State; (4) to lay out a preliminary long range plan for the development of the State and its natural resources, cooperating to the fullest extent with the New England Regional Planning Commission and with State and municipal agencies in Rhode Island.

Funds and Appropriations

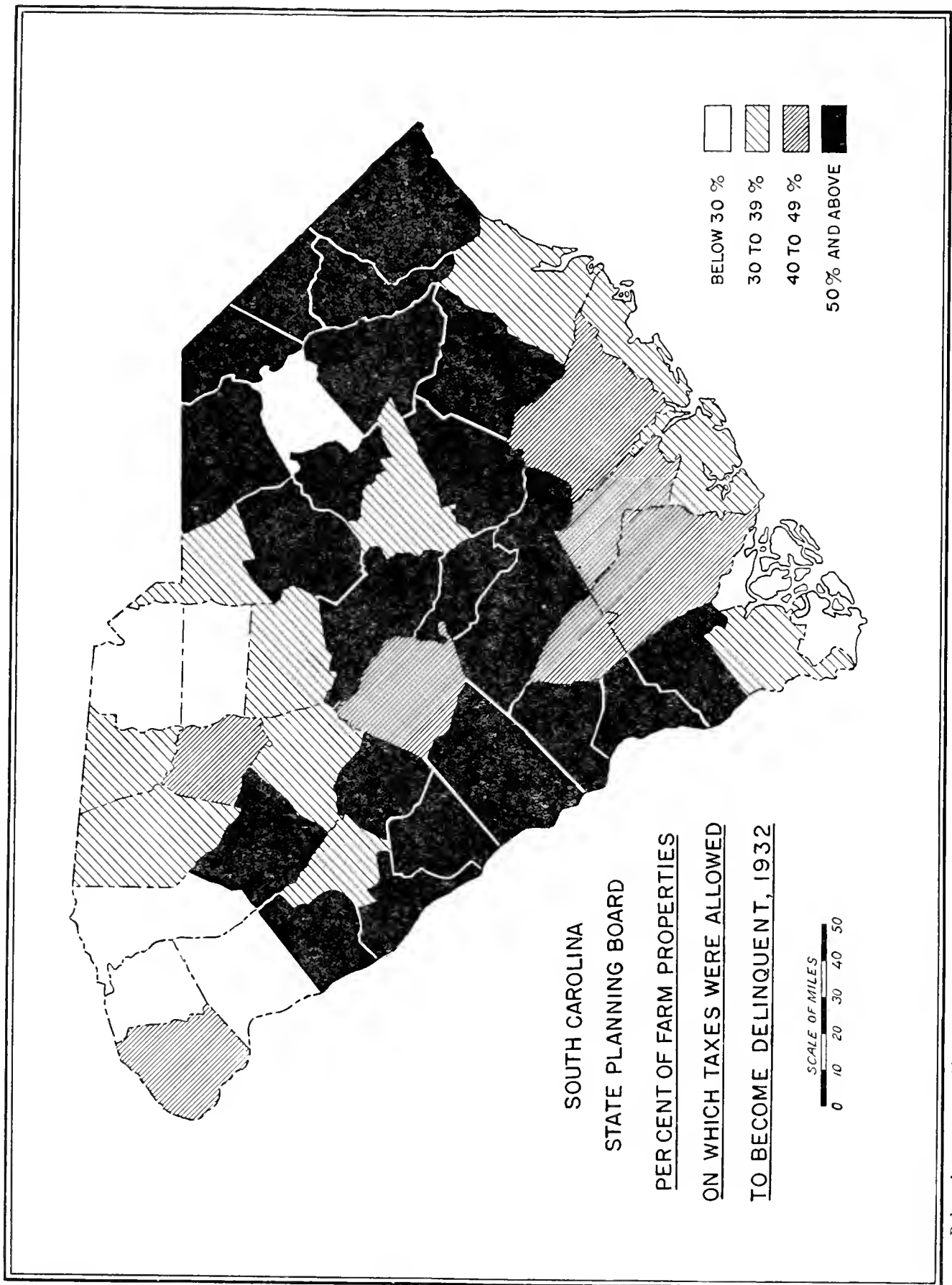
The Governor's planning board secured the cooperation of the State emergency relief administration for the maintenance of a staff and the purchase of supplies. At a special session of the Rhode Island legislature May 21 to May 28, 1935, the annual State appropriation bill was passed which carried with it an appropriation of \$10,000 for the use of the State planning board for the fiscal year ending June 30, 1936.

The State planning board recommends the acquisition, through Federal and State cooperation, of State forests, submarginal lands, and public ocean beaches for development into parks and recreational areas, including a State-wide parkway along the western border of the State.

At least 10 percent of the land in the State should be publicly owned.

The board also recommends the extension of water-supply systems, the development of sewage-disposal plants, systems for rural electrification, the improvement of transportation facilities, and the adoption of measures to improve housing, public health, and public safety.

The preservation of historic sites and of existing seventeenth and eighteenth century houses also is being strongly encouraged.



Redrawn from map prepared by land planning consultant.

SOUTH CAROLINA STATE PLANNING BOARD

BOARD APPOINTED IN SEPTEMBER 1933

NO LEGISLATION

Organization and Staff

In response to the National Planning Board's offer of cooperation, Gov. Ibra C. Blackwood in September 1933 appointed the South Carolina State Planning Board consisting of the following members: J. E. Serrine, Greenville, chairman; D. G. Ellison, Columbia; W. C. Bethea, Orangeburg; Dowell E. Patterson, Charleston; J. Roy Jones, commissioner of agriculture, Columbia; Charles O. Hearson, chairman State highway commission, Columbia; Dr. J. Adams Hayne, State board of health, Columbia. In January 1934, H. A. Smith, State forester, Columbia, was added.

This board was replaced on February 11, 1935, by the following members appointed by Gov. Olin D. Johnston: Wilton E. Hall, editor, Anderson Independent and Anderson Daily Mail, Anderson, chairman; A. B. Langley, Carolina Life Insurance Co., Columbia; John G. Richards, Liberty Hill; Archie Owens, Charleston; W. L. Rhodes, Estill; L. E. Brookshire, Greenville; A. J. Beattie, comptroller general, South Carolina, Columbia; C. C. Hinman, Greenville; D. L. M. Laurin, McColl. The headquarters of the South Carolina State Planning Board are in Greenville.

The National Resources Board assigned William B. Rogers, of Clemson Agricultural College, as land planning consultant. Mr. Rogers has maintained his

headquarters at Clemson, where the college has generously assisted his work in many ways. He has worked closely, also, with the State E. R. A.

Background and Citizen Support

As in many other States, the State planning in South Carolina prior to 1933 was practically confined to the field of conservation. City planning and zoning work has been done in three cities—Charleston, Columbia, and Greenville—but an active commission does not exist at present in any one of them. Conservation and development activities have been carried on chiefly by the Upper Carolina Development Association.

Duties and Functions

The first State planning board was charged by the Governor with the task of ascertaining the needs of State institutions in order to assist them in preparing projects for submission to the Public Works Administration.

To the present board has been assigned the task of formulating a comprehensive State plan, but due to lack of funds and other difficulties it has not been active during the past year. Planning work has thus been restricted to land studies made by the land planning consultants, which are basic to State planning.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Pursuant to its instructions from Governor Blackwood, the State planning board on December 18, 1933, submitted a report to the Governor on the construction needs of the various penal, charitable, and educational institutions of the State. A copy of this report was forwarded to the Public Works Administration for guidance in reviewing projects for South Carolina.

In 1934 the South Carolina Emergency Relief Administration conducted a thorough agricultural land use survey of the State, obtaining data on acidity of soils, general farm organization, livestock then on farms,

topography, erosion, soil types, crop land use, acreage, and management. It is now proposed that the land planning consultant assume supervision of the tabulation of these data, from which land ownership maps could be compiled.

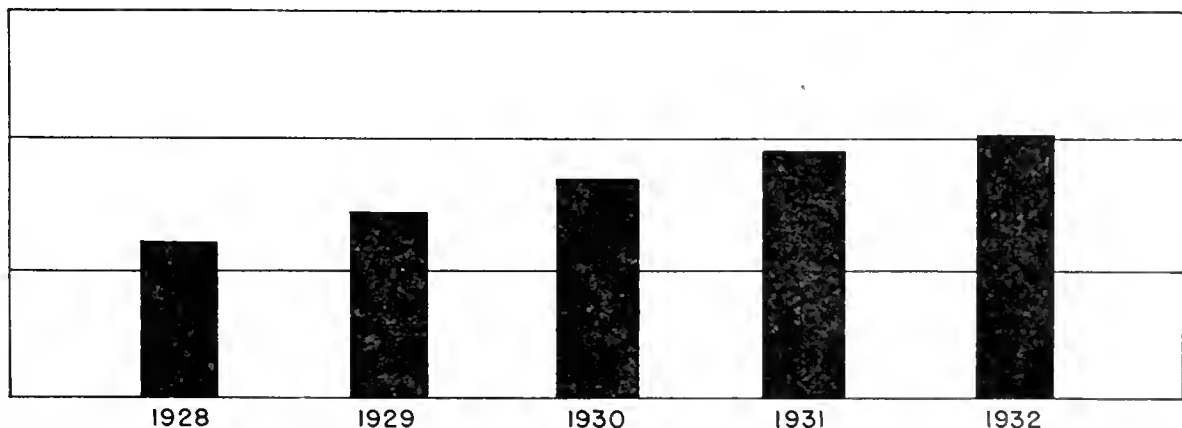
The future program of work includes, in addition to the above tabulation: (1) A study of farm real estate tax delinquency by school districts; (2) preparation of a State soil map; and (3) preparation of a State population map by expansion of a simple dot map made by the State agricultural experiment station.

TOTAL AMOUNT OF FARM REAL ESTATE TAXES BECOMING DELINQUENT
IN SOUTH CAROLINA, 1928 - 1932

AMOUNT OF
DELINQUENCY
(IN DOLLARS)

2,000,000

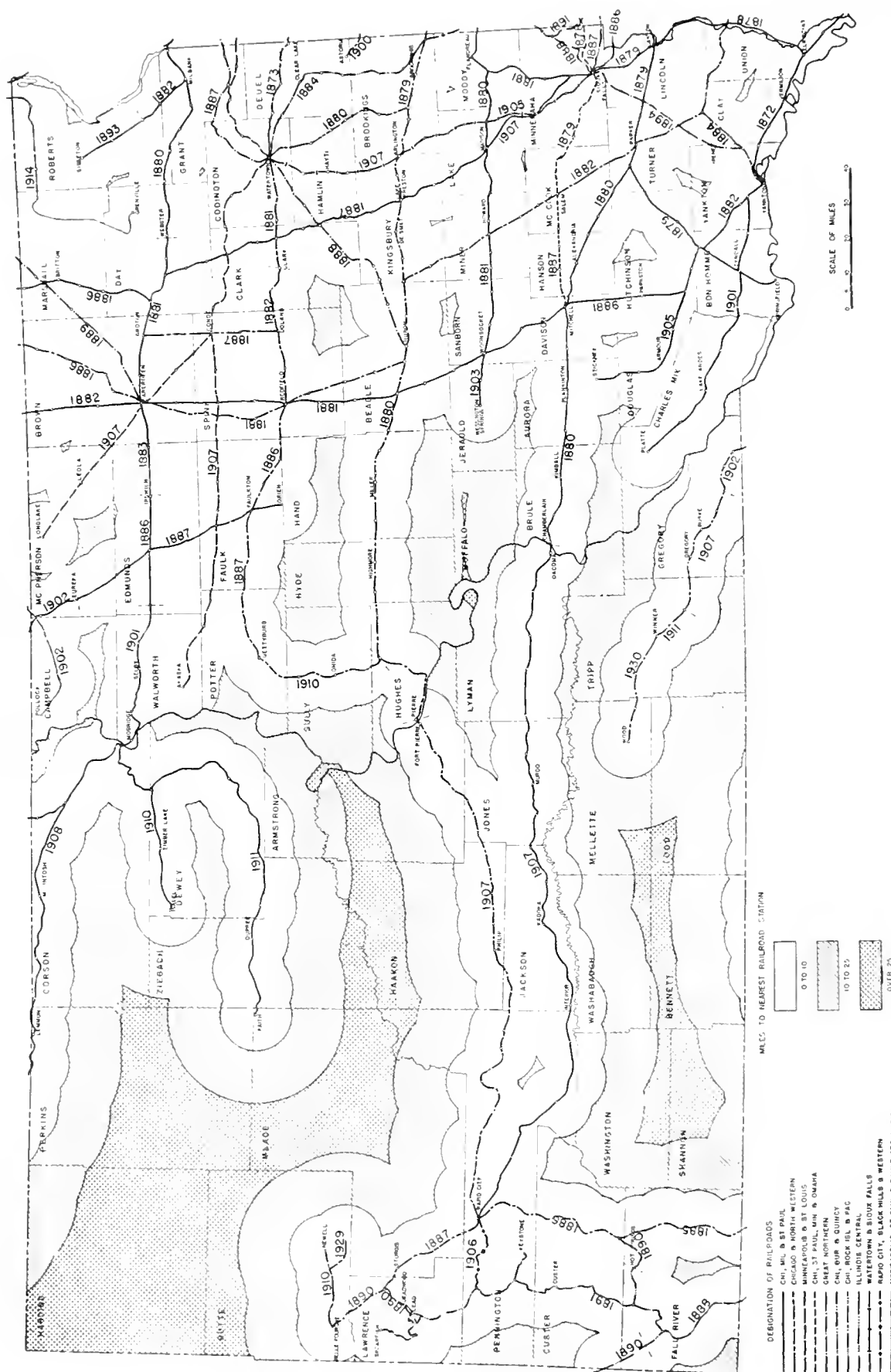
1,000,000



Redrawn from chart submitted by land planning consultant.

MILES TO NEAREST RAILROAD STATION AND DATES
 OF CONSTRUCTION OF ALL LINES

SOUTH DAKOTA STATE PLANNING BOARD



From "Progress Report", April 1, 1935.

SOUTH DAKOTA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 1934

LAW ENACTED (CH. 191) MARCH 1, 1935

Organization and Staff

A temporary State planning board was appointed by Gov. Tom Berry in February 1934 in response to the suggestion of the National Planning Board. The present membership is as follows: W. R. Ronald, chairman; S. H. Collins, secretary; Robert Lush; John T. Heffron; Dr. James C. Clark; Charles A. Trimmer; Dr. P. B. Jenkins; Charles Entsminger; Theodore Reise; Judge J. R. Cash; and I. D. Weeks. The National Resources Board assigned Charles W. Pugsley as consultant and Harry A. Steele, land planning consultant. Paul H. Landis was later named associate consultant. The 41 research workers provided by the State emergency relief administration since January 1935 have worked under the direction of the consultants.

The central research office has been established at State College, Brookings, S. Dak., where the consultants are located, and branch offices have been set up at the University of South Dakota, Vermillion, and at the State capital, at Pierre.

The State planning board is now engaged in assisting local and county planning agencies. By the end of May 1935 officially recognized county planning boards were designated in each county of the State.

Background and Citizen Support

The people of South Dakota retain the independence and self-reliance characteristic of frontiersmen. Generally speaking, the citizens of the State have been inclined to fear governmental encroachment and to look askance at anything in the nature of social regulation. In the light of this feeling, it is gratifying that the planning board should have been so fully accepted. However, the drought and adversity of the last few years apparently have demonstrated to the people that long-time planning, by an impartial group, is not only desirable but essential to the welfare of the State.

The State planning board has given wide publicity to the need of securing a sound factual background for planning, and has itself gained a reputation for impartiality. Because of this attitude, it has been able to check certain unsound promotional schemes, and to lend valuable support to worth while projects.

It is a significant indication of the reputation of the board that each measure which it sponsored was adopted during the 1935 session of the State legislature. The measures enacted were: a law creating a committee on stream pollution; a law increasing the power of the State to regulate the waste of artesian water; a law creating a State park board to have jurisdiction over park areas and Federal lands to be acquired for park and recreational purposes; a law empowering counties to acquire public parks and bodies of water;

Duties and Functions

The State planning act of 1935 authorizes the board: To make surveys of the natural and human resources of the State; to assemble and analyze the data obtained, and to formulate plans for the conservation and intelligent utilization and development of such resources; to make recommendations as to the best methods of such conservation, utilization, and development; to draft legislation setting up procedure governing the use, development, and conservation of natural resources, and the promotion of industrial and social facilities; to promote public interest and understanding of the State plans by use of research reports and of other means of publicity and education; to confer and cooperate with Federal agencies and with the executive, legislative, or planning authorities of neighboring States, counties, and municipalities in order to coordinate plans; to request public officials to furnish to the board such available information as it may require for its work, or to make surveys for the board, when directed to do so by the Governor.

Funds and Appropriations

The temporary planning board and its committees were reimbursed for necessary traveling expenses from the Governor's contingent fund. In addition, the State relief administration has provided a pay roll of approximately \$3,200 per month for full-time "white-collar" employees for research work, and as much relief labor as the board could use in its surveys and projects. Office space and equipment have been furnished by various State departments and educational institutions.

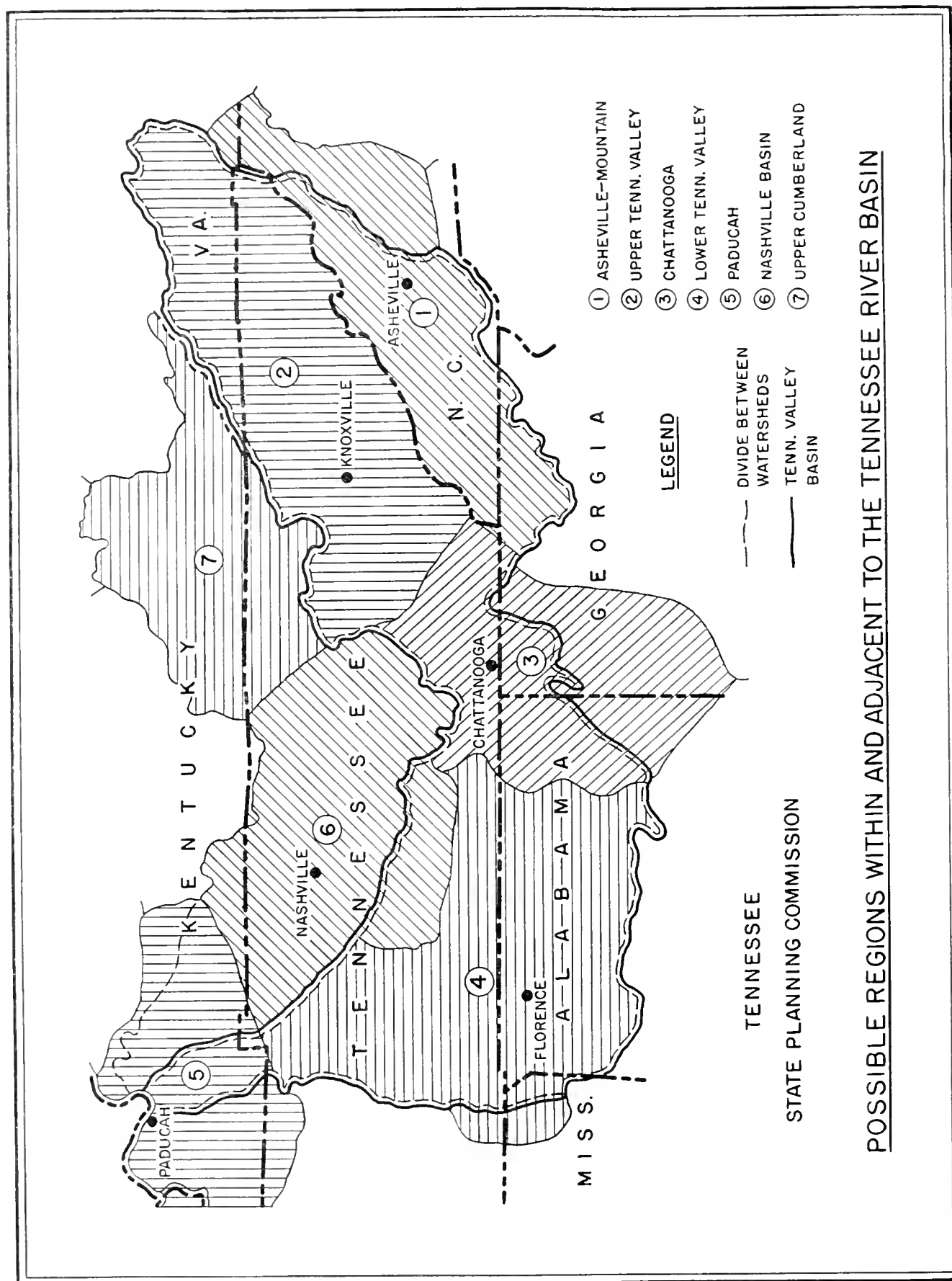
The last legislature, in February 1935 appropriated \$20,000 for the use of the State planning board during the biennium. This bill carried the emergency clause, and funds have been available through it for travel and office expense since April 1, 1935.

ACCOMPLISHMENTS AND RECOMMENDATIONS

and an enabling act for the organization of grazing associations.

The State planning board submitted 36 projects to the Public Works Administration in the recent public-works inventory. A majority of these contained requests for funds to finance surveys in certain fields in which technical studies must precede definite planning recommendations.

Through its various committees, the State planning board has designated and recommended for public purchase a large number of areas, most of them of a submarginal nature, for parks, upland game refuges, migratory water fowl refuges, and forests. The planning board committees have also actively assisted in the selection of areas for C. C. C. camps for forest work, soil erosion, water conservation, and for other purposes.



TENNESSEE

STATE PLANNING COMMISSION

GOVERNOR'S BOARD APPOINTED FEBRUARY 17, 1934

LAW ENACTED FEBRUARY 19, 1935 (CH. 43)

Organization and Staff

In response to suggestions from the National Planning Board and the Tennessee Valley Authority, Gov. Hill McAlister appointed a temporary State planning board on April 11, 1934. Under the Tennessee statutes, a Tennessee Valley commission was created in 1933 to assist the work of the Tennessee Valley Authority. Members of the Commission were Art J. Dyer, chairman; Judge D. C. Webb; William W. Goodman, secretary; John A. Chambliss; C. E. Pigford; and W. R. Rackley. The same persons were designated by the Governor to serve as the State planning board, and W. T. Ellis, Jr., was appointed administrative assistant and E. P. Callahan head of the land-use program. Gerald Gimre was assigned by the National Planning Board as consultant and, later, Broder F. Lucas was named land planning consultant by the National Resources Board.

The State planning board secured the enactment of a bill in the 1935 session of the legislature, creating the Tennessee State Planning Commission. The new commission is composed of: Art J. Dyer, Nashville, chairman; William W. Goodman, Memphis, secretary; Judge D. C. Webb, Knoxville; Gov. Hill McAlister, ex-officio; C. E. Pigford, Jackson; John A. Chambliss, Chattanooga; W. R. Rackley, Pulaski; Capt. Winston Baird, Jacksboro; and R. C. Whitnel, Jr., Dyersburg. W. T. Ellis, Jr., was appointed executive director, the other consultants and the same staff being retained.

Background and Citizen Support

Counties and cities in Tennessee operate under special legislative charters, so that the task of bringing about comprehensive State planning presents unusual difficulties.

The five largest cities in the State have been active in city planning, but in the majority of the areas needing

it there is no precedent for planning. It is encouraging that passage of the planning bills in the legislature was strongly supported by the representatives from the small cities and rural areas, by the Tennessee Valley Authority, and also that wherever the purposes of the commission have been adequately explained, group support has been won.

Duties and Functions

The act of 1935 creating the commission provides that it shall be the function and duty of the commission to make and adopt a general plan for the physical development of the State, including public ways, grounds, utilities, facilities, and all other developments of a State-wide or regional character; also a land utilization program and the zoning ordinances necessary to carry it out. The commission is empowered to cooperate with the Tennessee Valley Authority and with neighboring States and counties and cities of such States.

In the nature of an experiment is the clause in the act empowering the commission to create planning regions and to define their boundaries. The members of such regional planning commissions as may be created are to be appointed by the State planning commission, and the regional commissions are to make appropriate plans subject to the general authority of the State planning commission.

Funds and Appropriations

The commission has been functioning to date principally through loans and gifts from other agencies. The Governor transferred \$5,000 from other funds to the commission in August 1934 and the staff has been retained through the Tennessee Emergency Relief Administration and the University of Tennessee agricultural extension service. Contributions from all sources averaged approximately \$2,500 per month.

ACCOMPLISHMENTS AND RECOMMENDATIONS

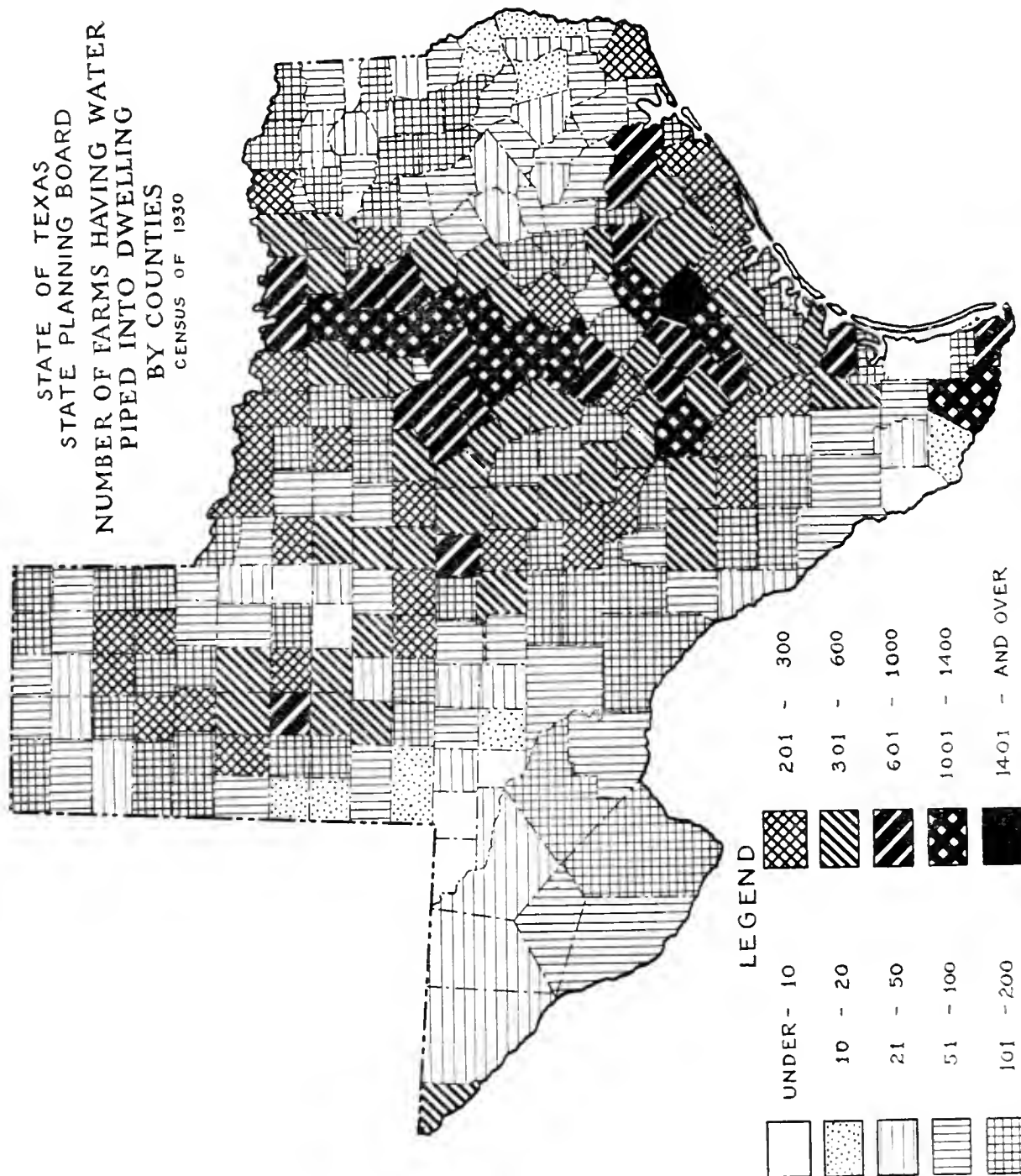
The commission and its staff have been at work nearly 8 months. A preliminary report on land-use problems was submitted to the National Resources Board last year and with the cooperation of the Tennessee Valley Authority, the land-use consultant, Broder F. Lucas, and the land-use committee at the University of Tennessee, a revised report has been prepared. The commission is assisting in field investigations and recommendations for submarginal land purchases, and is gradually bringing about coordination of effort in all phases of the Federal and State land-use programs.

Studies have been made of the financial condition, major economic resources and physical facilities of the counties.

In cooperation with the State engineer of the Public Works Administration, an inventory was made of possible public works projects, and the staff of the commission assisted the Tennessee Emergency Relief Administration in making a rural electrification and a housing survey of the State.

The commission assisted in securing the enactment of the following measures in the 1935 session of the legislature: (1) State Planning Act; (2) Municipal Planning Act; (3) Regional Platting and Subdivision Act; (4) Municipal Platting and Subdivision Act; (5) County Zoning Act; (6) Municipal Zoning Act; (7) An Act Providing for Constructing Landing and Loading Facilities on Navigable Waters; (8) General Enabling Act for Utilizing Surplus T. V. A. Power; (9) Act Revising Powers and Jurisdiction of Railroad and Public Utilities Commission; (10) Enabling Act for Acquisition and Operation of Electrical Generating and Distribution System; (11) Act Exempting Certain State and Federal Corporations from Powers and Jurisdiction of Railroad and Public Utilities Commission.

Studies now in process are: (1) Survey of the physical plant of the public schools of the State, together with recommendations for a future building program; (2) preparation of a transportation plan; (3) preparation of a public works program; (4) land utilization survey; (5) studies of existing laws relative to lands.



TEXAS

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED MAY 1934

LAW ENACTED IN MARCH 1935 (CH. 33)

Organization and Staff

The semiofficial board appointed May 1934 by Gov. Miriam A. Ferguson, comprised a large group of men having both comprehensive and specific knowledge of Texas and its varied resources and problems. The members were Marvin C. Nichols, consulting engineer, Fort Worth, chairman; A. M. Vance, State reclamation engineer, vice chairman; Dr. A. B. Cox, bureau of business research, University of Texas, secretary; Dr. J. W. Brown, State health officer; C. S. Clark, member, State board of water engineers; Jack Rafferty, engineer, Houston; Dr. E. H. Sellards, director, bureau of economic geology, University of Texas; Dr. E. O. Siecke, director, Texas Forest Service, College Station; Lon A. Smith, chairman State railroad commission; Dean T. U. Taylor, dean of engineering, University of Texas; and John Wood, member, State highway commission.

Terrell Bartlett, San Antonio, consultant, and Maj. E. A. Wood, Dallas, associate consultant, were appointed in August 1934, by the National Resources Board, with John L. Watson, as the land consultant, and L. S. Paine, of the staff of the agricultural and mechanical college, as associate land consultant. The staff has consisted of five clerks furnished by the Texas Relief Commission, and one stenographer furnished to the land consultants by the National Resources Board.

The official board, created by statute and appointment of Gov. James V. Allred, has recently been organized. The members are W. M. Massie, chairman, banker, Fort Worth; Hull Youngblood, manufacturer, San Antonio; Gerald Mann, secretary, ex-officio, Secretary of State of Texas; Wilbur Hawk, publisher, Amarillo; R. C. Hopping, colonizer, Lubbock; E. L. Kurth, lumberman, Lufkin; Wallace Reilly, labor representative, Dallas; John A. Norris, ex-officio, chairman, State board of water engineers; and Gibb Gilchrist, ex-officio, State highway engineer. The board has authority to ask State officials for assistance, so members of the original board may continue cooperative service.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The work of the original board has largely consisted of collecting and correlating information concerning major resources and needs of the State and its people. Texas possesses a number of efficient departments created for conservation work and the development of its resources, in specific fields, with which the State planning board cooperates. Notable among these are the agricultural experiment and extension services, the State board of water engineers, the bureau of economic geology, the bureau of business research of the State university, the State reclamation department, the forest service, park board, and the board of health.

Most of the component parts of a comprehensive State plan are well covered from the physical standpoint by programs of various State departments. The central State planning group is endeavoring to relate

Background and Citizen Support

The diversity of climate, land, people, water and mineral resources, and the equal importance of agriculture and industry, present a vast problem for State planning in Texas. Formal planning activities in the past have been restricted to city planning and the beginning of a State park system, both mainly since the World War. Popular support of these local efforts, however, indicates an attitude which is favorable to State planning.

Duties and Functions

The 1935 enabling statute gives the Texas Planning Board authority of a purely advisory character, and prohibits administrative action. By very reason of its freedom from administrative interests, its influence with the people and governmental agencies of the State can, with wise exercise of its advisory function, become very effective. The duties imposed embrace consideration of a long-range plan for physical development of the State, and the recommendation of economic and social measures for the welfare of the people; advising the Governor and legislature and ascertaining what Federal funds are allocated for use in the State and of formulating a comprehensive State program for constructive expenditure.

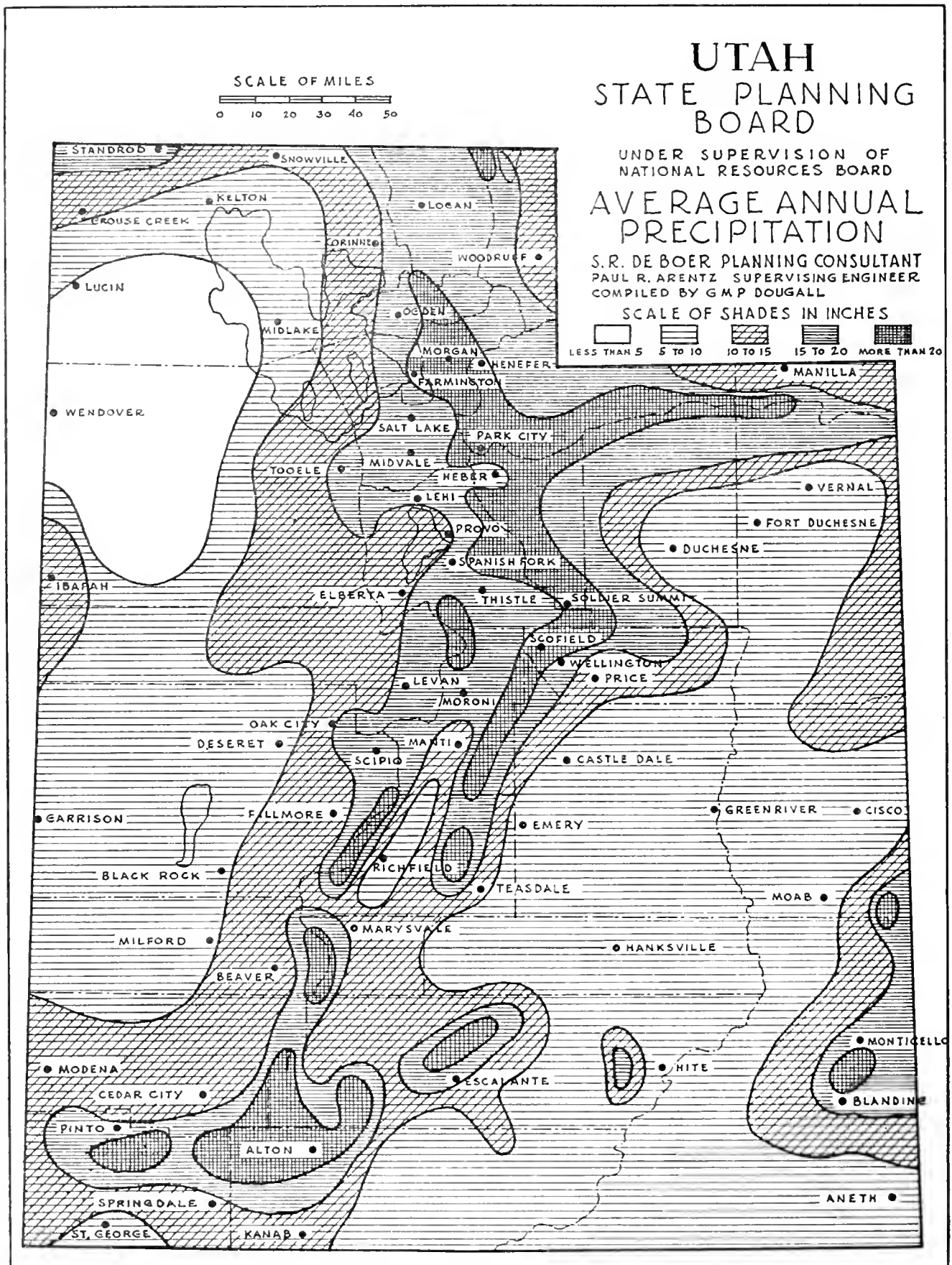
Funds and Appropriations

The Texas board has had a small staff of five persons furnished by the Texas Relief Commission for some months. An allotment of \$5,000 was obtained from the same source for industrial studies with reference to the unemployment situation. Various State departments have furnished office space, furniture, and a limited amount of supplies.

The statute creating the board, appropriated \$12,000 for the 4 months to the end of the current biennium, August 31, 1935; \$40,000 for the year ending August 31, 1936; and \$30,000 for the year ending August 31, 1937.

these distinct programs, first, to one another, and then to the field of private undertakings, and the day by day commercial operations of the people.

Major recommendations of the board were limited to the following: (1) That Federal agencies operating in the State should confer with, and give proper weight to the recommendation of competent local persons and agencies, conversant with the conditions; (2) that any policy of large submarginal removals, should be developed with great caution; (3) that the colonization of large areas of valuable virgin agricultural lands in Texas should be undertaken in such a manner as to facilitate owner operation, and discourage tenant operation; (4) that development of the vast possibilities of manufacturing in Texas be encouraged by all classes of citizens, particularly farmers.



UTAH

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED APRIL 9, 1934

Organization and Staff

The State planning board was appointed by Gov. Henry H. Blood on April 9, 1934. Members of the board at that time were: Governor Blood, ex-officio chairman; William R. Wallace, acting chairman; Dean Ray B. West, first vice chairman; J. O. Elton, second vice chairman; R. A. Hart, executive secretary; William Peterson; J. M. Bamberger; T. H. Humphreys; K. C. Wright; Dr. Dilworth Walker; Dr. Hyrum Schneider; Dr. D. A. Lyon; Dr. Dorothy Nyswander; Dr. Carl F. Eyring; Harry L. Finch; Dr. John A. Widsoc; Geo. A. Yager; and C. G. Adney. Following a request made to the National Planning Board for a planning consultant, S. R. DeBoer, of Denver, was assigned to the Utah board.

On October 18, 1934, when its first reports were submitted to the National Resources Board, the State planning board offered its resignation to the Governor of the State. On December 5, 1934, a new board was organized, with the Hon. Henry H. Blood, Governor, as ex-officio chairman; Ray B. West, acting chairman; William R. Wallace, honorary chairman; R. A. Hart and J. O. Elton as vice chairmen; and Dean R. Brimhall as executive secretary.

During the first 6 months Dr. Dilworth Walker, professor of economics at the University of Utah, acted as director, and on January 3, 1935, Dr. Dean R. Brimhall was appointed as permanent director of the staff. A staff of assistants composed of economists, expert mining and hydraulic engineers, a librarian, an architect, a secretary, clerks and draftsmen was furnished by the State E. R. A.

Background and Citizen Support

Utah's planning history actually began nearly 100 years ago when the Mormon pioneers entered the Great Basin of the Salt Lake in 1847. The matter of how to arrange their settlements, their towns and farms had been given careful consideration long before their arrival. Consequently they were able to erect

LAW ENACTED MARCH 26, 1935 (CH. 71)

a comparatively enduring social and economic structure in the new territory. One of the early plans which has materially influenced the State's development was the establishment of farm villages, residence centers situated in the midst of grouped farms.

The vision and energy of the Mormon pioneers has created in Utah a commonwealth which is an example of planning in many respects. Previous to 1933 there had been no official committee or department of State delegated and authorized to prepare a coordinated State plan for Utah. The Utah National Resources Association, however, has been organized and functioning for 3 years.

Duties and Functions

A State law was passed by the 1935 legislature creating an official State planning board of six members with the Governor as ex-officio chairman. The law authorizes the making of studies and requires the cooperation of State departments in formulating plans for the material, economic, and social development of the State.

To this end, all city and county agencies are requested to cooperate in order to coordinate State and local plans with those of Federal agencies.

Funds and Appropriations

At the time of the appointment of the State planning board there were no funds available for the board's operation, but the Federal Emergency Relief Administration provided a staff of 15 employees. Of the amount of money necessary for this purpose the State has paid approximately 12 percent in addition to paying the required compensation insurance, totaling \$1,303.46. The total amount of money spent between April 20, 1934 and May 7, 1935 was \$34,374.80. An additional sum of \$14,928.14 has been allotted for expenses from May 7 to October 15, 1935. The State law does not provide any funds for the operation of the State planning board.

ACCOMPLISHMENTS AND RECOMMENDATIONS

A number of studies have been undertaken by the State planning board, one of which dealt with population increase and shifts, another with recreational possibilities.

Studies in land utilization show that three-fifths of the State is still Government-owned, and only one-fifth actually belongs to private citizens. This condition makes such problems as highway building, provision for national recreation, flood protection, grazing, and erosion control, etc., definitely national problems.

Studies of water resources show the need for more storage facilities and more careful economic planning for irrigation districts. Over enthusiasm has caused many promotions to go beyond the physical possibilities of the available land and water. The State is 1 of 4 upper basin States of the Colorado River.

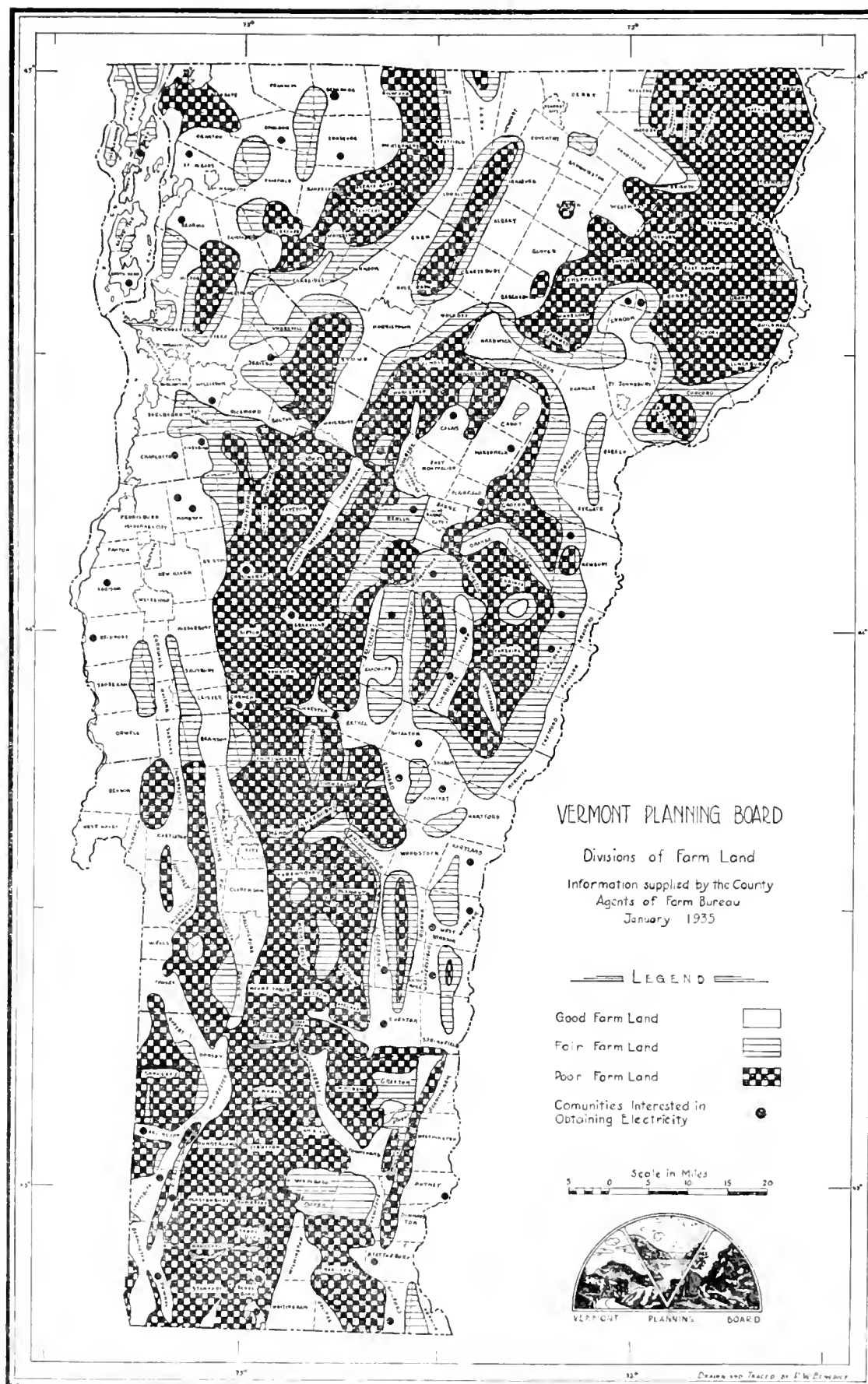
Agriculture is largely a matter of cattle and sheep grazing, supplemented by a limited amount of irrigation farming. Studies of the planning board show that Utah holds an important place in national food pro-

duction, because of the unusual quality of produce characteristic of high altitudes.

Surveys show that Utah also is important in metal production. In 1933 it ranked fourth in total copper mines, second in lead, fifth in gold, sixth in zinc and second in silver. It has unlimited deposits of coal.

Some of the accomplishments of the planning board during the past year are: (a) Study of the diking of part of the Great Salt Lake, which includes studies of water supply, power, engineering design and feasibility, sewage disposal, etc. (b) Recommendation for a statutory department of public welfare. (c) Recommendation for the removal of the State penitentiary to a more suitable location.

Other studies were made of the following subjects: land utilization, population, recreation, transportation, water resources, commercial trade, public works, county zoning, and the Salt Lake-Ogden regional plan. Studies now in progress are: land utilization, mineral resources, public works, and underground water.



From "Graphic Survey—A First Step In State Planning for Vermont", 1935.

VERMONT

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED MAY 10, 1934

Organization and Staff

In response to the National Planning Board's offer of cooperation and assistance, Gov. Stanley C. Wilson on May 10, 1934, established by executive order the Vermont State Planning Board. Members were George Z. Thompson, chairman of the State highway and public works boards, chairman; E. H. Jones, commissioner of agriculture; Perry H. Merrill, commissioner of forestry; Proctor H. Page, commissioner of finance; James Brown, commissioner of fish and game; Thomas B. Wright of Burlington, president of the State chamber of commerce; and Frank Langley of Barre. The National Resources Board assigned John Nolen as consultant; Philip Shutler, associate consultant; and Albert LaFleur, land planning consultant.

When, in January 1935, Gov. Charles M. Smith took office, new members were appointed to comprise the board. They were: Perry H. Merrill, commissioner of forestry, acting chairman; William L. McKee, commissioner of finance; E. H. Jones, commissioner of agriculture; James Brown, commissioner of fish and game; Raymond E. Farwell, member State highway board; Thomas B. Wright, of Burlington; Frank E. Langley, of Barre. This board served until May 1, 1935. On May 1, 1935, Governor Smith appointed the following permanent board: Frederick W. Shepardson, of Burlington, chairman; Arthur H. Packard, Hericho; Ralph E. Flanders, Springfield; Fred Martin, Bennington; and Carol E. Jenkins, Barton.

Background and Citizen Support

The reports and recommendations of the highway commission and the committee on flood control, ap-

LAW ENACTED APRIL 11, 1935 (ACT 18)

pointed by the legislature in 1892 and 1927, respectively, together with the traffic survey's report of 1926 are outstanding examples of pioneer planning by State departments. The University of Vermont, cooperating with the United States Department of Agriculture and State agencies, prepared and published a bulletin on land utilization.

Duties and Functions

The planning board enabling act provides for a board of five citizen members and an advisory committee composed of the heads of all State departments. The act empowers the board: (1) To make studies, draft plans, and make recommendations to the Governor and the legislature for the development of recreation, industry, and agriculture; (2) to study the physical, social, and economic development of the State's resources; (3) to advise and cooperate with other State departments in regard to advertising the attractions and resources of the State; (4) to assist, by advice and cooperation, in conserving and promoting the public health, safety, convenience, and general welfare of the people of the State; (5) to participate in interstate, regional, and national planning efforts.

Funds and Appropriations

The executive department provided office space and incidental supplies for the board, and the highway department contributed materials and services. The State emergency relief administration furnished technical, research, and clerical personnel, and other State departments cooperated by supplying information, services, and advice to assist in the board's work.

ACCOMPLISHMENTS AND RECOMMENDATIONS

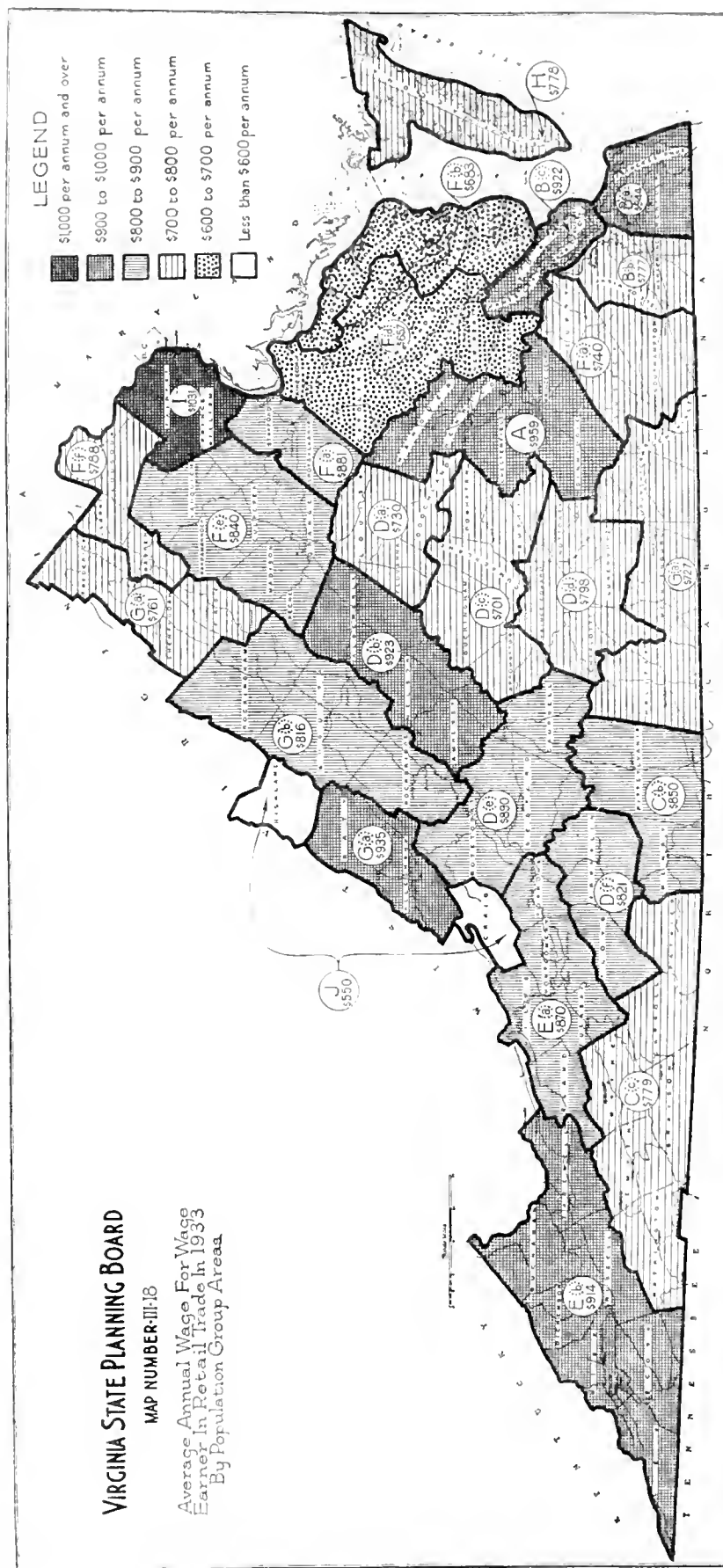
Population problems have been of especial interest to the board. Two maps have been prepared from data supplied by the State department of public health: (1) A medical map showing the location of all physicians and hospitals in the State and the main road systems about those towns having no resident doctors; (2) a sanitation map showing the distribution of present water supplies and sewage systems and the location of disposal plants.

From records of the public service commission, a map of the present electric power developments in the State has been prepared. This shows the horsepower of both steam and hydroelectric plants, together with the transmission and major distribution systems.

Revenue studies have been made for each town in the State with reference to its population, sums spent for relief, property valuation, tax rate, tax delinquency, total indebtedness, and cash on hand. The State planning board cooperated with the State public works administration in compiling an inventory of public-works projects.

An adequate and sound land-use program is being developed through the appointment of 2 committees to study land-use and rural-zoning problems, and by a land-use survey in 15 towns. Through collaboration with the A. A. A. and the Agricultural Extension Service, plans are being made to permit Federal and State land-planning agencies to coordinate their programs.

When time and available funds permit, the planning board recommends the following projects be undertaken: (1) Preparation of basic data maps; (2) development of an adequate and sound land program; (3) prosecution of studies of water resources, flood control, and stream pollution; (4) review and revision, in cooperation with State P. W. A. engineer, of the projects in the State inventory of public works; (5) preparation of a 6-year program of public works; (6) an industrial survey of Vermont with special attention to power development; (7) a comprehensive study of State recreational resources in cooperation with the State conservation department and private agencies concerned with recreation.



VIRGINIA

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED SEPTEMBER 2, 1933

Organization and Staff

The Virginia State Planning Board is now an official board, appointed by the Governor under the authority of a resolution of the general assembly passed February 21, 1934.

The board was first appointed September 2, 1933, with the following Members: Morton L. Wallerstein, executive secretary, League of Virginia Municipalities, chairman; LeRoy Hedges, managing director, Virginia State Chamber of Commerce; Richard Messer, chief engineer, division of sanitary engineering, State department of health; Henry G. Shirley, State highway commissioner; Raymond V. Long, director, division of school buildings, State department of education; Douglas S. Freeman, editor, Richmond News Leader; Arthur W. James, State commissioner of public welfare; Richard A. Gillian, executive secretary, State commission on conservation and development; Adolph Wagner, supervisor of State power plants; Joseph J. Dirzulaitis, senior hydraulic engineer, State commission on conservation and development; C. P. Hasbrock, publisher of Richmond Times-Dispatch; John Hopkins Hall, Jr., State commissioner of labor; Sidney B. Hall, State superintendent of public instruction; and Charles E. Seitz, Polytechnic Institute.

The staff of the board, as of May 1, 1935, comprises a consultant assigned by the National Resources Board, Russell V. N. Black of New Hope, Pa., and consultant-director, Charles J. Calrow, 1200 Travelers Building, Richmond, Va., serving under the joint appointment of the National Resources Board and the State planning board. There is also an executive assistant, a director of research, a secretary, and a group of draftsmen, statisticians, and typists furnished by the Virginia

RESOLUTION PASSED IN JANUARY 1934

Emergency Relief Administration. A land-planning consultant, William H. Flippin of the department of agricultural economics, Virginia Polytechnic Institute, was also assigned by the National Resources Board. Mr. Irving C. Root served as consultant for the first 6 months' period after the organization of the board.

Background and Citizen Support

In addition to the valuable work done by the State commission on conservation and development, created by the legislature in 1926, several special commissions have from time to time studied specific problems such as social security, governmental economy and efficiency, farm conditions, city zoning, forestry, game and inland fisheries, and conservation of sea food. Thus the general aims of State planning have for many years been endorsed by the great majority of public officials and leading citizens.

Duties and Functions

The board is charged with the duty of cooperating with the Federal program of public works in order to work out a program of the most useful and economic projects for Virginia.

Funds and Appropriations

The State has furnished \$3,300 for specific activities of the board. Effective March 1, 1935, a grant from the Spelman Fund amounting to \$33,500 became available, this grant to cover the period beginning March 1, 1935, and ending June 30, 1936. Loans of services and equipment have been made by State agencies, and persons from the relief rolls have been furnished by State emergency relief administration.

ACCOMPLISHMENTS AND RECOMMENDATIONS

Prior to its present work, the State planning board had rendered valuable services in setting up the works program of the P. W. A. within the State, the furthering of certain soil-erosion projects, and the creation of a commission to study the pollution of the waters of Chesapeake Bay and Hampton Roads. Since May 1, 1934, the board has been engaged in building up factual data and studying the reports of various committees and commissions. Its work has been done principally through committees and with assistance rendered by the State departments, the State educational institutions, the Virginia State Chamber of Commerce, and the League of Virginia Municipalities.

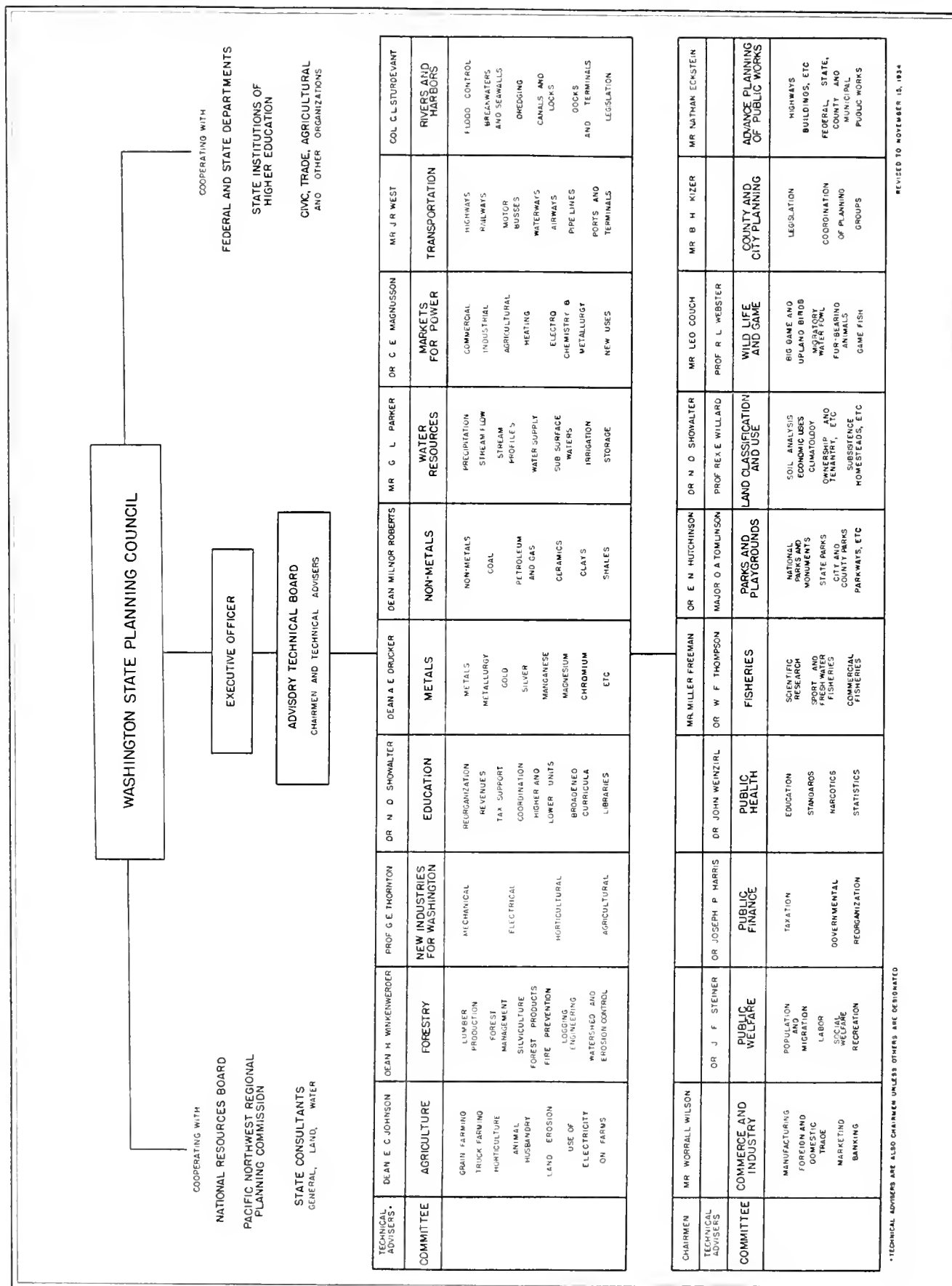
During the earlier part of the active period of operations, the greater emphasis was placed on studies relating primarily to the people of the State, their distributions, shifts, occupations, earnings, and standards of living. Other studies covering natural resources, industry, recreational areas, agriculture, transportation, trade, educational facilities, public health, taxation, and government were, however, not neglected, and work in connection with these subjects has progressed.

Land-use studies in Virginia have suffered under the

handicap of lack of soil mapping in the State, but the work has now progressed to the stage when final refinement in the determination of "problem areas" is in order.

In addition to the activities described above, the Virginia State planning board has endeavored to perfect a plan for its operations as an advisory-coordinating unit designed to advise the Governor, the general assembly, and the administrative departments of the State with relation to those types of State activities which may be benefited by planning procedure.

An interesting development, correlated with and supplementing the work of the board, has been the creation of a Governor's advisory council on legislation consisting of leading members of the general assembly and certain members of the State administration. This council, which is also financed by a generous grant from the Spelman Fund, will consider among other matters all legislation affecting State planning and its coordination with national planning activities. Through this agency it should be possible to present to the next session of the general assembly well conceived legislation covering further State plans



WASHINGTON

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED JANUARY 17, 1934

LAW ENACTED IN 1934 (CH. 44)

Organization and Staff

On January 17, 1934, an enabling act was signed by the Governor creating the Washington State Planning Council. The Governor appointed as members to the board: B. H. Kizer, an attorney of Spokane, chairman; Nathan Eckstein, business man of Seattle, vice chairman; E. F. Banker, director of the department of conservation and development, treasurer; J. M. McClelland, newspaper publisher, Longview; Elmer L. Breckner, superintendent of schools, Tacoma; Miller Freeman, publisher and original member of the international fisheries commission; Fred Nelsen, a grange officer; Eldridge Wheeler, superintendent of schools, Montesano; and A. E. Larson, a business man of Yakima, who has since died. R. K. Tiffany, M. Am. Soc. C. E., consulting hydraulic engineer, was appointed executive officer.

An advisory committee consisting of members of the faculty of the State college and the University of Washington was formed. In July George F. Cotterill was appointed consultant by the National Resources Board, and about the same time E. F. Landerholm was named land-planning consultant.

Background and Citizen Support

In the larger cities of the State, planning had taken its position as one of the necessary functions for guiding rational growth. An active State chamber of commerce had long existed, as well as good roads associations, reclamation institutes, etc. State and Federal agencies offered their assistance to the council.

ACCOMPLISHMENTS AND RECOMMENDATIONS

First investigations dealt with the natural resources, though social problems were not neglected by the board.

A master plan of flood control was requested of the council, and it promptly reported three necessary steps: (1) The need of Federal legislation defining a Federal flood-control policy; (2) the need of similar State legislation; (3) the collection of authentic flood-damage data covering the damage by floods in 1933-34. Proposed Federal legislation was referred to the State's delegation at Washington, D. C. Three bills were introduced and passed in the State legislature, providing for: (1) Regulation of all streams in the State; (2) the creation of flood-control districts; and, (3) the State's policy in regard to cooperation with the United States and with flood-control districts. Complete flood-damage data was obtained in 24 counties in the State, these investigations being financed with funds from Washington emergency relief administration.

Other accomplishments are as follows: (1) Land classification and use surveys were conducted in cooperation with the State college, the university, and the A. A. A.; (2) a forestry report; (3) investigations into various crops; (4) field and laboratory work is being conducted through the State college and the

Duties and Functions

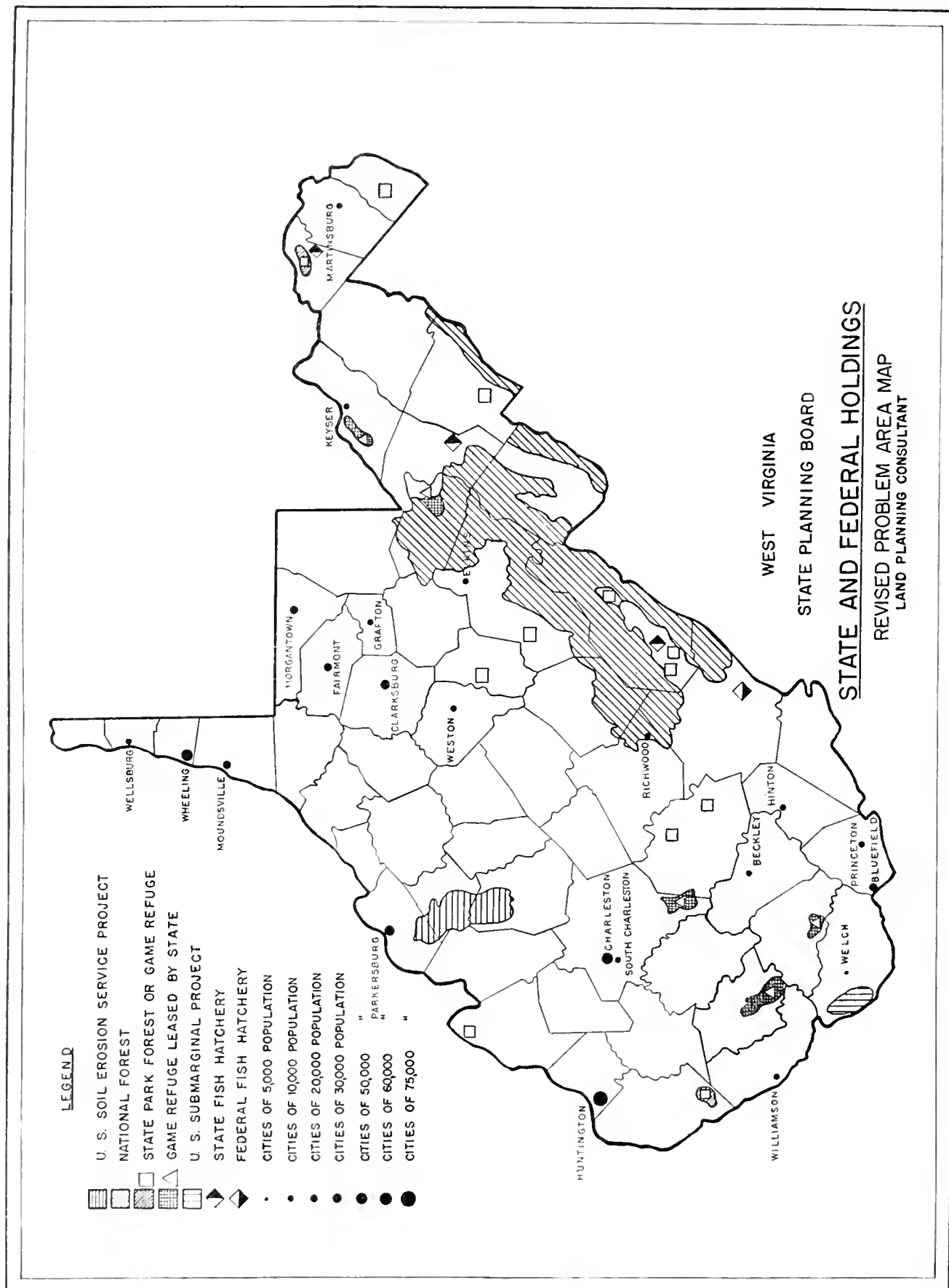
Broadly speaking, the law provided for the State planning council to collect information and to make recommendations for the proper use of all natural resources. In particular the council is required to prepare and perfect a State master plan for flood control, State public reservations, sites for public buildings, and for the economical and orderly development of the natural, agricultural, and industrial resources of the State. The following policies were adopted: (1) That, as far as possible, no appeal be made directly to the State for funds for researches and studies under the council; (2) that much of the work be carried out by voluntary assistance; (3) that where necessary work could not be carried out through voluntary service an appeal be made to existing agencies rather than directly to the State; (4) that the council conduct no propaganda.

Funds and Appropriations

The law creating the council carried with it no appropriation, but \$10,000 was provided from the Governor's emergency fund and subsequently increased to \$12,200 for the first year.

The Washington emergency relief administration, which provided personnel, assisted in forwarding the survey work through its six district managers. At the regular session of the legislature, just adjourned, \$10,000 was allowed, and assurance of additional help, if necessary, has been given by the Governor.

university, and appropriations are being requested to continue it; (5) both State and Federal appropriations have been requested to continue the gathering of facts on stream flow, ground water, water storage, and other essential information for domestic and industrial water supplies, for irrigation, power development, and flood control; (6) with two large Federal power projects now under construction, at Grand Coulee and Bonneville, recommendations have been made urging the construction of a high dam at Grand Coulee, the key-point on the Columbia River. Experiments are under way on domestic uses of electricity, including the heating of homes; (7) a balance sheet of the State of Washington is being prepared. When completed, it will show what the State consumes of its own products; (8) recommendations have been made for the purchase exchange, and extension of State Parks and playgrounds; (9) studies of game refuges and wildlife are going forward; (10) a bill permitting the creation of city, county, and intercounty planning commissions was introduced and passed at the last session of the legislature; (11) the council cooperated with the State public works administration engineer in the compilation of useful public works; (12) it published its first biennial report to the Governor.



WEST VIRGINIA STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED FEBRUARY 21, 1935

Organization and Staff

The West Virginia State Planning Board was appointed by Gov. Herman G. Kump on February 21, 1935, in response to the standing offer of cooperation of the National Resources Board. The members were: W. P. Wilson, Wheeling, chairman; Ernest L. Bailey, commissioner of highways, Charleston, vice chairman; Trammel Hollis, Martinsburg; L. T. Putman, Beckley; C. J. Jarrett, commissioner of labor, Charleston; H. W. Shawhan, director of conservation, Charleston; Arthur E. McClue, State health commissioner, Charleston; J. B. McLaughlin, commissioner of agriculture, Charleston; W. W. Trent, State superintendent of schools, Charleston; and C. R. Orton, West Virginia University, Morgantown. S. L. Galpin, National Resources Board land consultant, Morgantown, was appointed acting director and W. S. Roberts, Charleston, acting secretary.

Background and Citizen Support

City planning boards have been organized in Bluefield, Hinton, Princeton, Richwood, Wellsburg, Williamson, and Wheeling, and are under consideration in several other cities. Eleven counties have organized, 10 others are in process, and several more are contemplating the setting up of planning boards. Interest in this kind of public service is increasing in most sections of the State. Data gathered by the Wheeling City Planning Board is proving useful to the State board

WILL SUBMIT BILL TO NEXT LEGISLATURE

in coordination of Federal, State, and municipal activities in West Virginia.

An unofficial organization, known as the Upper Monongahela Planning Council, is interested in planning for 10 counties in the northcentral part of West Virginia. A report on this district has been prepared by a special committee appointed by President Roosevelt, consisting of representatives of the Departments of the Interior, Agriculture and Labor. Members of the faculties of West Virginia University and University of Pittsburgh and technical employees of the State and Federal Governments helped in preparing the report.

Duties and Functions

It is the duty of the State planning board to study all of the natural and human resources of the State and to plan for their most efficient and economical development. The board may confer and cooperate with Federal agencies, interstate and regional planning authorities, and planning boards in neighboring States on all matters which affect the resources of West Virginia, and advise county and other local planning agencies.

Funds and Appropriations

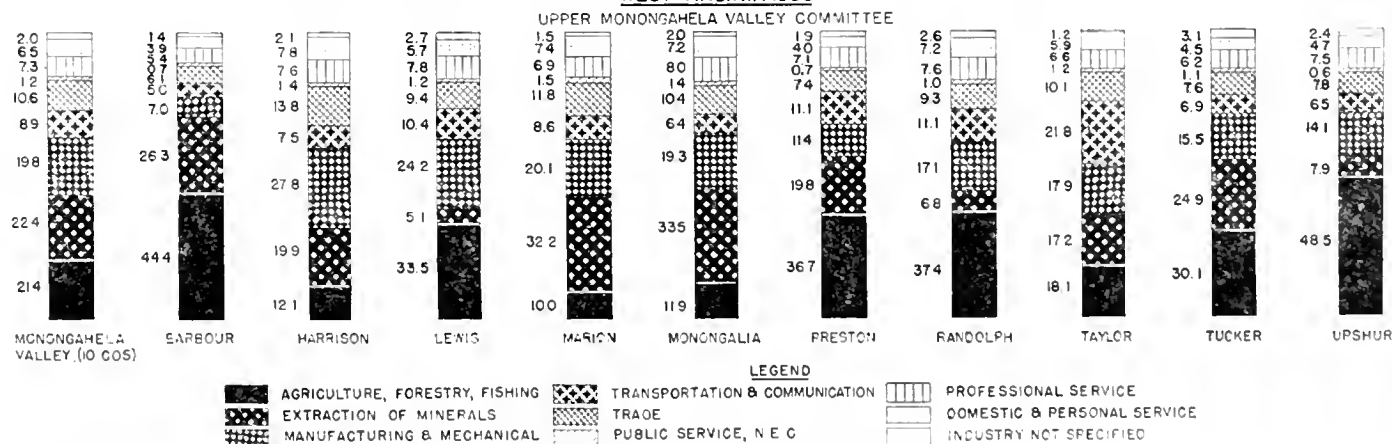
At present the West Virginia State Planning Board is operating with practically no expense to the Federal Government or the State. During the next session of the legislature, a bill will be presented asking for legislative sanction of the State planning board.

ACCOMPLISHMENTS AND RECOMMENDATIONS

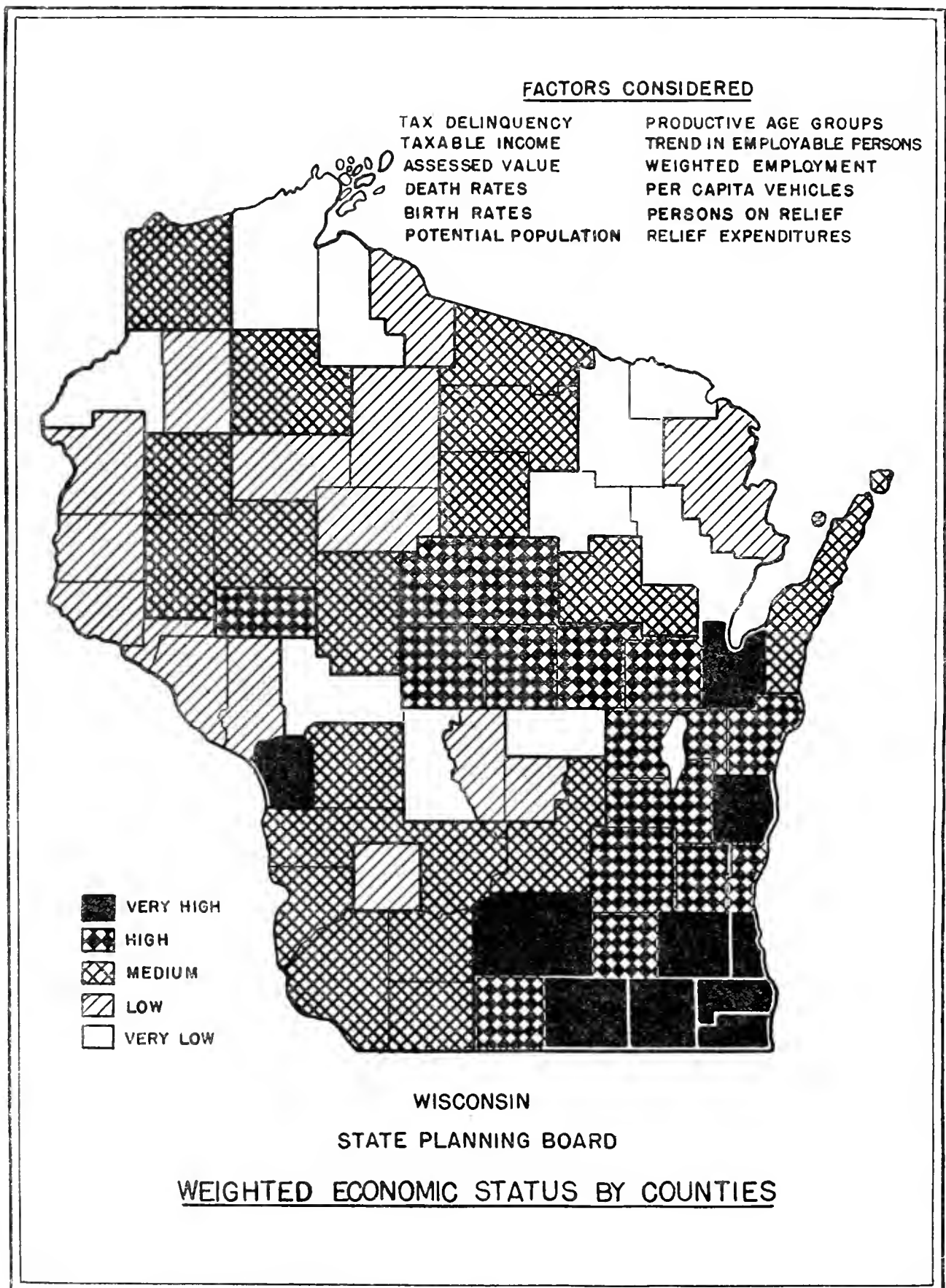
The board has undertaken an inventory of the resources of the State with the cooperation of State departments, the West Virginia State University, the Agricultural Extension Service, the Agricultural experiment station, the United States Department of Agriculture, and the West Virginia Relief Administration. Land resources, land use, and the distribution and trends of population are being studied.

When adequate information is available, recommendations will be made regarding public acquisition and control of land; the development of recreational resources; the extension of transportation facilities; flood and erosion control and stream pollution; and, in cooperation with the State Public Works Authority engineer, desirable public works projects.

DISTRIBUTION OF GAINFUL WORKERS BY BROAD INDUSTRIAL CLASSIFICATION IN TEN SELECTED COUNTIES IN
WEST VIRGINIA 1930



From "Report of the Committee on the Upper Monongahela Valley", West Virginia, November 7, 1934.



Redrawn from data in "Wisconsin Regional Plan Report—1934."

WISCONSIN STATE PLANNING BOARD

FIRST STATUTORY BOARD CREATED, 1931

Organization and Staff

A regional planning committee consisting of State officials and the State director of regional planning, a position created in 1929, was organized in 1931. This was the first statutory general State planning commission in the United States. After the appointment, early in 1934, of a National Planning Board consultant to Wisconsin, this committee, with the addition of three citizen members, appointed by the Governor, acted as the State planning board. The committee included: W. E. O'Brien, State highway commission, chairman; C. A. Halbert, State chief engineer; Dr. C. A. Harper, board of health; H. W. MacKenzie, conservation commission; A. R. McDonald, public service commission; and H. R. McLogan, industrial commission, all members required by statute. Floyd A. Carlson, city plan engineer of Kenosha; C. R. Dineen, chairman of the Milwaukee County Park Board; and R. B. Goodman, Marinette lumberman and member of the State conservation commission, are the citizen members. M. W. Torkelson is full-time director of the State planning work and a member of the committee. Jacob L. Crane, Jr., of Chicago, is consultant, and Sidney Henderson is land planning consultant, both of whom were assigned by the National Resources Board.

The statutory board created by the 1935 law, is as follows: State chief engineer, C. A. Halbert; member of the public service commission, A. R. McDonald; member of the highway commission, W. E. O'Brien; member of the industrial commission, Harry R. McLogan; member of the tax commission (a new member has not been designated); member of the board of control (a new member not yet designated); two representatives of the State university designated by the president (new members not yet designated); State health officer, Dr. C. A. Harper; director of conservation, H. W. MacKenzie; State superintendent of public instruction, John Callahan; director of the budget, J. B. Borden; three citizens appointed by the Governor (new members not yet designated); the Governor, ex-officio chairman, Hon. Philip F. LaFollette; State director of regional planning, secretary and administrative officer, M. W. Torkelson.

Background and Citizen Support

Wisconsin was a pioneer in county planning, having 18 of its 71 counties zoned for rural land use, and a

NEW LAW ENACTED JUNE 1935 (CH. 165)

number of other county zoning plans in preparation. In 1929, the legislature required the highway commission to appoint a director of regional planning. One urban county, Milwaukee, adopted a zoning ordinance for industrial, residential, and commercial land uses. Two industrial counties have partial zoning ordinances. All but three of the Wisconsin cities of more than 10,000 population have city planning commissions or zoning ordinances, and most of them have both.

The development of the planning activities is well reflected in the programs, legislation, and progress in conservation, reforestation, stream improvement, and recreation.

Duties and Functions

A law to amend the original act of June 1935, changes the name from regional planning committee to State planning board, defines its functions as follows: "The State planning board shall assemble and correlate data and information with reference to the development of the State and its subdivisions, which may be appropriate subjects of State concern; the general location and extent of forests, agriculture areas and open development areas for purposes of conservation, food and water supply, sanitary and drainage facilities, and the protection of urban and rural development; also a land utilization program, including the general classification and allocation of the land within the State amongst agricultural, forestry, recreational, soil conservation, water conservation, industrial, urbanization, and other uses and purposes."

Funds and Appropriations

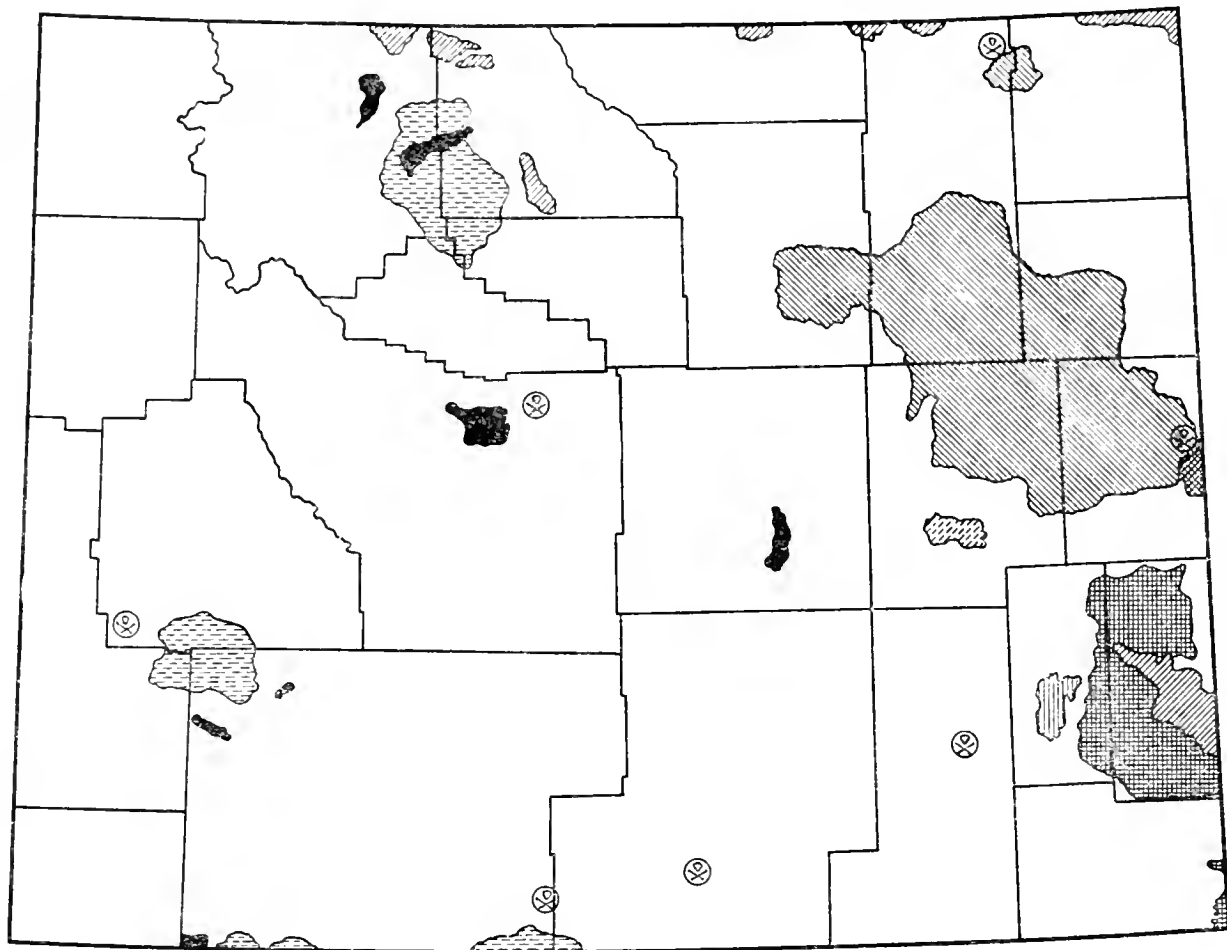
No provision for State funds for planning was made in the acts of 1929 and 1931, other than an allowance for the salary of the director, which was carried as part of the State highway commission's appropriation. In March 1934 a staff began work, with salaries paid by the Civil Works Administration and materials and director's salary furnished by the State highway commission. This arrangement was continued under the Emergency Relief Administration. At the present time E. R. A. expenditures average \$3,500 monthly, which is matched by an equal amount of State funds for materials, office space, and salary of director. A law enacted in June 1935, chapter 164, provides for an appropriation for State planning work amounting to \$50,000 annually.

ACCOMPLISHMENTS AND RECOMMENDATIONS










Two reports have been published, a progress report issued in August 1934 and the March 1935 first annual report of the committee. The accomplishments of the board and its committees may be summarized as follows: (1) The subcommittee on land use is assuming a major responsibility in the coordination of land planning and Federal land purchase programs; (2) studies and recommendations have been made on forestry, wildlife and recreation programs with reference to administration, taxation, and land acquisition policies; (3) a program for immediate employment of those on relief; (4) a State-wide inventory of public work

was made and analyzed with the State P. W. A. engineer; (5) studies and recommendations were made for the reorganization of the administrative and taxation policies of the State educational system; (6) a plan for the extension of Government health administration was advanced; (7) a forecast was made of the probable age and distribution of the 1960 State population; (8) a study was made of potential electric power consumption in the State.

Working relationships with the various agencies concerned with planning have been increasingly strengthened, thus facilitating future work.



LEGEND

-  20% or more farms on land of low productivity
-  Change in size, tenure or financial status is desirable
-  Irrigation and drainage projects in serious financial distress
-  Water supply needed
-  Low livestock carrying capacity
-  Poisonous plant menace
-  Watershed control needed
-  Low livestock carrying capacity and low productivity
-  Resettlement areas

WYOMING STATE PLANNING BOARD PROBLEM AREA MAP

WYOMING

STATE PLANNING BOARD

GOVERNOR'S BOARD APPOINTED MARCH 2, 1934

LAW ENACTED FEBRUARY 1935 (CH. 42)

Organization and Staff

Following correspondence between Governor Miller of Wyoming and the National Planning Board, the Governor, on March 2, 1934, appointed the Wyoming State Planning Board, consisting of Prof. H. T. Person, engineer of the Wyoming State University, chairman; Edwin W. Burritt, State engineer, secretary; James B. True, superintendent of highways; Dr. W. H. Hassed, State health officer; Hon. W. B. Saunders, lumber dealer and merchant; State senator George C. Muirhead, banker and stockman; W. J. Witherspoon, garage man and automobile dealer, and Dr. R. A. Hocker, Cheyenne, manager of the Wyoming Game and Fish Commission. Upon recommendation of the board and Governor Miller, H. H. Schwartz, lawyer and State senator, was assigned by the National Planning Board as consultant for the first 6 months' period. Later, Thomas E. Doughty was assigned by the National Resources Board as land planning consultant.

Upon the enactment of the State planning act, in February 1935, the members of the Governor's board resigned and on May 1, 1935, the following persons were appointed to the permanent board: L. E. Laird, Worland, business man and formerly head of State highway department; J. E. Hanway, Casper, newspaper publisher; Ross Alcorn, Rawlins, newspaper proprietor, formerly State auditor; R. Hurtt, Newcastle, banker; James B. True, Cheyenne, a member of the old board, and State highway superintendent; Dr. R. A. Hocker, and Edwin W. Burritt, Cheyenne, members of old board. The board retained Dan W. Greenburg of Cheyenne as secretary and office manager. L. E. Laird is president and J. E. Hanway, vice president.

Background and Citizen Support

The conservation of water and land resources of the State has always been a problem of vital interest to the people of Wyoming. Recently, the droughts and poor range conditions for livestock have further served to focus the attention of the people upon the misuse and depletion of natural resources within the State. Water

resources already had been the subject of study by State agencies, but the appointment of the planning board represented the first attempt to study coordinated development of all the State's resources.

Wyoming has for years been concerned also with State and Federal parks, forests, and other public lands which represent a considerable part of the State's area.

Duties and Functions

In general the State planning board is empowered by law to initiate, investigate, and recommend projects and plans for the orderly and economic development of public works in Wyoming. The projects may include water conservation, stream and lake control and improvement; transportation systems and their improvement; propagation, protection, and control of fish and game; surveys of soils, their uses and fertility; mineral resources and their present and future development; education, health, and community improvements; and studies directed toward the economic organization and function of government and public service.

Funds and Appropriations

State funds were not available to the Governor's board when it was organized in March 1934. In the emergency, the chamber of commerce of the city of Casper furnished, for 1 year, suitable offices and office equipment for use by the board. In addition, H. H. Schwartz, consultant, permitted the board to use his offices and the part-time services of a stenographer. The Civil Works Administration supplied a staff of 2 draftsmen, 1 landscape architect, 23 technical and clerical assistants, 1 clerk, and 1 stenographer. After the closing of the Civil Works Administration program, the State emergency relief administration generously supplied a small staff through works projects. Ample funds were made available for the water resources study by the State water conservation board and cooperating county governments. In lieu of State funds, valuable assistance for the general work of the board was provided in different forms by private citizens, chambers of commerce, and service clubs.

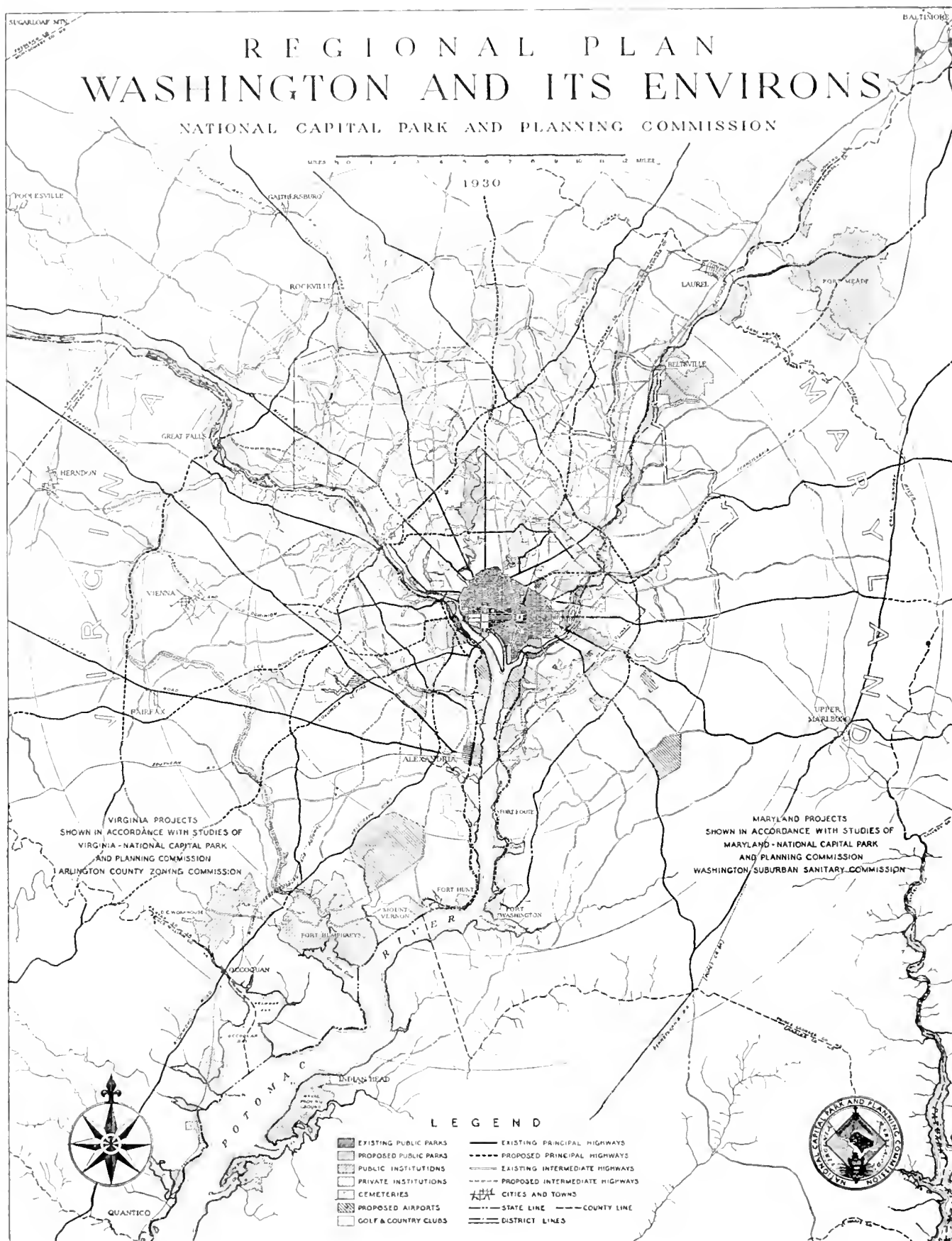
ACCOMPLISHMENTS AND RECOMMENDATIONS

The work accomplished by the planning board during the first 6 months consisted of: (a) A survey of the submarginal lands of the State, which included the listing of resident unemployed desirous of transferring to reclamation or other productive farm units; (b) a survey of the principal county roads, for pertinent information on population, business, and traffic; (c) a preliminary survey of the municipal water supply and existing sewage disposal plants in all the principal cities and towns of the State; (d) a project for uniform county maps. The board advised State and Federal agencies in planning highway and recreational projects.

The program of work adopted by the board for its second 6 months includes: A planning study for deter-

mining economic land uses to attain a balance between summer grazing and winter feeding of livestock; planning for the extension and modernization of State game and fish hatcheries; assisting in planning the State's water conservation program through creation of county planning boards; preparing county highway maps; surveys of highway traffic and planning for the development of the Jackson Hole area.

The unofficial State planning board considered public works projects aggregating approximately \$55,000,000. The official planning board has approved all such projects now pending in its offices and is preparing a coordinated program of public works for the entire State.



DISTRICT OF COLUMBIA

NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Organization and Staff

The National Capital Park and Planning Commission was established by Act of Congress approved April 30, 1926, with a membership consisting of the Chief of Engineers, United States Army; the Chief of the Forest Service, the Director of the National Park Service, the Chairman of the House Committee on the District of Columbia, the Chairman of the Senate Committee on the District of Columbia, the Engineer Commissioner of the District of Columbia, four citizens "well qualified in city planning," and the Director of Public Buildings and Public Parks who is named as Executive Officer. The present membership of the Commission is as follows: Frederic A. Delano, chairman; Arno B. Cammerer, Director of National Park Service, vice chairman and executive officer; Maj. Gen. Edward M. Markham, Chief of Engineers, United States Army; Lieut. Col. D. I. Sultan, Engineer Commissioner, District of Columbia; F. S. Sileox, Chief, Forest Service; Wm. H. King, Chairman Senate Committee on the District of Columbia; Mrs. Mary T. Norton, Chairman House Committee on the District of Columbia; Henry V. Hubbard, Cambridge, Mass.; J. C. Nichols, Kansas City, Mo., and Wm. A. Delano, New York City.

The Commission is served by a staff with John Nolen, Jr., as director of planning, and Thomas S. Settle as secretary.

Background and Citizen Support

The L'Enfant Plan of Washington is famous as an example of planning in this country. The development of the city has not always followed the detail, or spirit, of the original plan, but the planning idea has never

been lost sight of for any long period. The principles of the original plan were revived by the Senate Park Commission of 1901. A National Capital Park Commission was set up in 1924 and its powers and membership enlarged in 1926 to form the present Commission.

Duties and Functions

The Commission is charged "with the duty of preparing, developing, and maintaining a comprehensive, consistent, and coordinated plan for the National Capital and environs, which plan shall include recommendations to the proper executive authorities as to traffic and transportation; plats and subdivisions; highways, parks, and parkways; school and library sites; playgrounds; drainage, sewerage, and water supply; housing, building, and zoning regulations; public and private buildings; bridges and water fronts; commerce and industry; and other proper elements of city and regional planning." The act further stated: "It is the purpose of this act to obtain the maximum amount of cooperation and correlation of effort between the departments, bureaus, and commissions of the Federal and District Governments. To this end plans and records, or copies thereof, shall be made available to the National Capital Park and Planning Commission when requested. The Commission may, as to the environs of the District of Columbia, act in conjunction and cooperation with such representatives of the States of Maryland and Virginia as may be designated by such States for this purpose * * *."

In addition, the act abolished the old highway commission, and conferred all its functions, powers, and duties upon the Planning Commission.

ACCOMPLISHMENTS AND RECOMMENDATIONS

During the first 5 years of its work, under the leadership of Col. U. S. Grant as executive officer, the Commission furthered the execution of the L'Enfant Plan and Plan of 1901 through the purchase of park properties, guidance of the public building program, control over arrangements of new streets, etc. Through its staff, under the direction of Charles W. Eliot 2d, as director of planning, and in cooperation with planning agencies in Maryland and Virginia, a regional plan for Washington and environs was developed and published January 17, 1930.

Since the inauguration in 1926 of the present Commission's work, over 3,554 acres have been added to the Park system of the Region, the Commission has prepared and presented a regional plan for Washington and its environs.

Within the large outlines of the regional plan, the following specific projects and accomplishments are:

1. A thoroughfare plan for the District of Columbia, together with acceptance by the municipal authorities of standard street widths and sidewalks.

2. Plans for a complete system of city parks, playgrounds, and neighborhood recreation centers.

3. Legislation and appropriations for a continuing program of park land acquisition.

4. Plans for railroad and terminal facilities, and for improvement of existing street-car lines.

5. Recommendations relating to city-planning elements of the Federal building program, and on school and municipal center building programs.

6. Some 137 changes in the street plan to secure economy and better layouts.

7. Legislation to protect Government projects against injury by incongruous or harmful developments on adjacent private property.

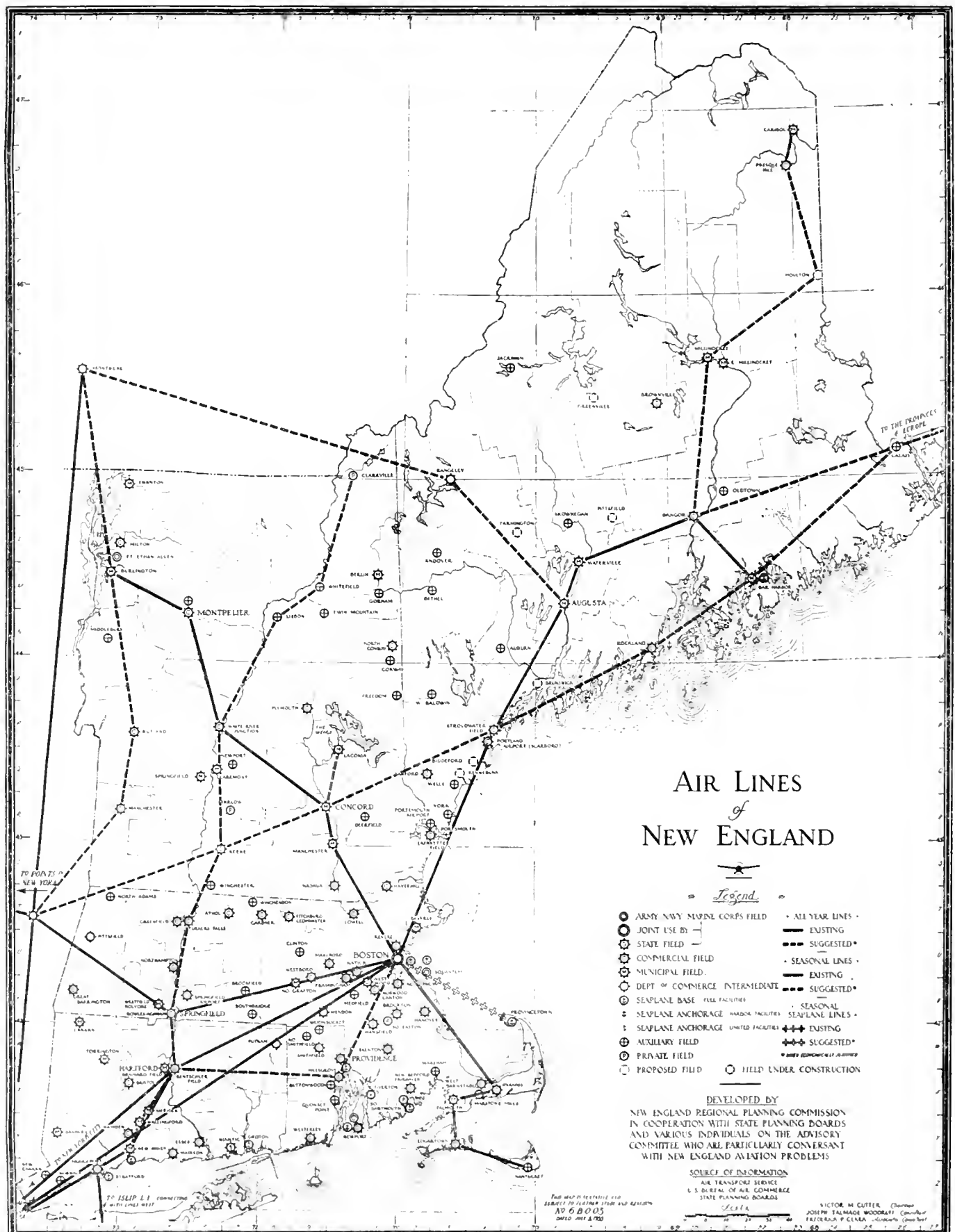
8. Revision of legislation for acquisition of property by condemnation.

9. Wide study of park administrative organization.

10. Intensive study of automobile traffic and parking problems in the congested central area, and recommendations for solving them which resulted in special legislation by Congress.

11. Study of slum conditions, with particular reference to alley dwellings, and passage of legislation.

Close relations have been established with administrative agencies of Federal and District governments to the end that plans would be carried out, constantly revised and kept up to date. Coordination of public works projects has been given particular attention.



Tentative unpublished map.

NEW ENGLAND REGIONAL PLANNING COMMISSION

COMMISSION ORGANIZED MARCH 2, 1934

Organization and Staff

There has long been wide-spread interest in regional planning for New England and several attempts have been made to form a New England planning association. In March 1934, with the cooperation of the National Planning Board, representatives appointed by each of the New England Governors met and organized the New England Regional Planning Commission: "To establish a permanent body for the coordination of planning effort in the several New England States and for the making of basic regional studies for this area."

The commission is composed of the chairman of each of the five State Planning Boards in the region, a member at large, a chairman appointed by the National Resources Board, and a representative from Massachusetts, pending the establishment of a board in that State. The present membership of the commission is as follows: Victor M. Cutter, chairman; John Nicholas Brown, Rhode Island; Frederick W. Shepardson, Vermont; Frederic H. Fay, Massachusetts; Prof. William L. Slate, Connecticut; Capt. James Langley, New Hampshire; Samuel Stewart, Maine; Mrs. Charles Sumner Bird, member at large. Joseph T. Woodruff was assigned as consultant and Frederick P. Clark as associate consultant by the National Planning Board.

Background and Citizen Support

To focus local interest and criticism on the broad programs developed by the commission, an advisory

LAWS ENACTED IN 1935 BY FIVE STATES

committee has been formed, composed of more than 500 representative individuals interested in planning, located throughout New England. Of this number, 167 members are officials of various governmental agencies, 247 are representatives of civic organizations, and the remainder are private citizens.

In New England there are many organizations whose interests center about one particular phase of public affairs. Through the assembly of material from these many sources, and through the cooperation of the individuals designated to represent them, the commission hopes to bring about a wider use of the great fund of available information regarding New England.

Funds and Appropriations

The National Resources Board supplies to the regional commission a chairman, consultant, associate consultant, and a staff of nine. The Massachusetts E. R. A. provides 14 engineering and clerical assistants. For approximately 6 months the Emergency Planning and Research Bureau of Boston loaned the services of 3 engineers for part-time work. Necessary office supplies, formerly provided by the Massachusetts E. R. A., are now furnished by the National Resources Board.

Through cooperation by other organizations, personnel and equipment were supplied in the formative days of the commission. The New England Council has been particularly accommodating in lending equipment and the services of its employees, and in addition has published articles and pamphlets produced by the commission's staff.

ACCOMPLISHMENTS AND RECOMMENDATIONS

The commission realizes that the making of a broad regional plan for New England requires long-time effort. It realizes also that we are passing through a period of emergency activity wherein the carrying out of a vast public-works program requires some type of broad planning which will serve as a partial index, at least, for the guidance of expenditures. To meet this emergency, it was thought desirable to formulate, in close cooperation with the State Planning Boards, a preliminary plan for New England covering those features which are of a distinctly New England character, at the same time accumulating the essential data, preparing the necessary basic maps, and compiling records for future planning.

One of the most important studies now being conducted by the commission is that of interstate stream problems. This covers the Connecticut, Merrimack, and Blackstone Rivers drainage basins. It is concerned with matters relating to flood control, erosion, pollution, recreation, navigation, and power. In February 1935 a Water Resources Committee was appointed, comprising experts on water problems, one representing each State Planning Board. Prof. H. K. Barrows, regional water consultant of the National Resources Board, is chairman. The committee already has reported to the commission, recommending necessary Federal and State legislation.

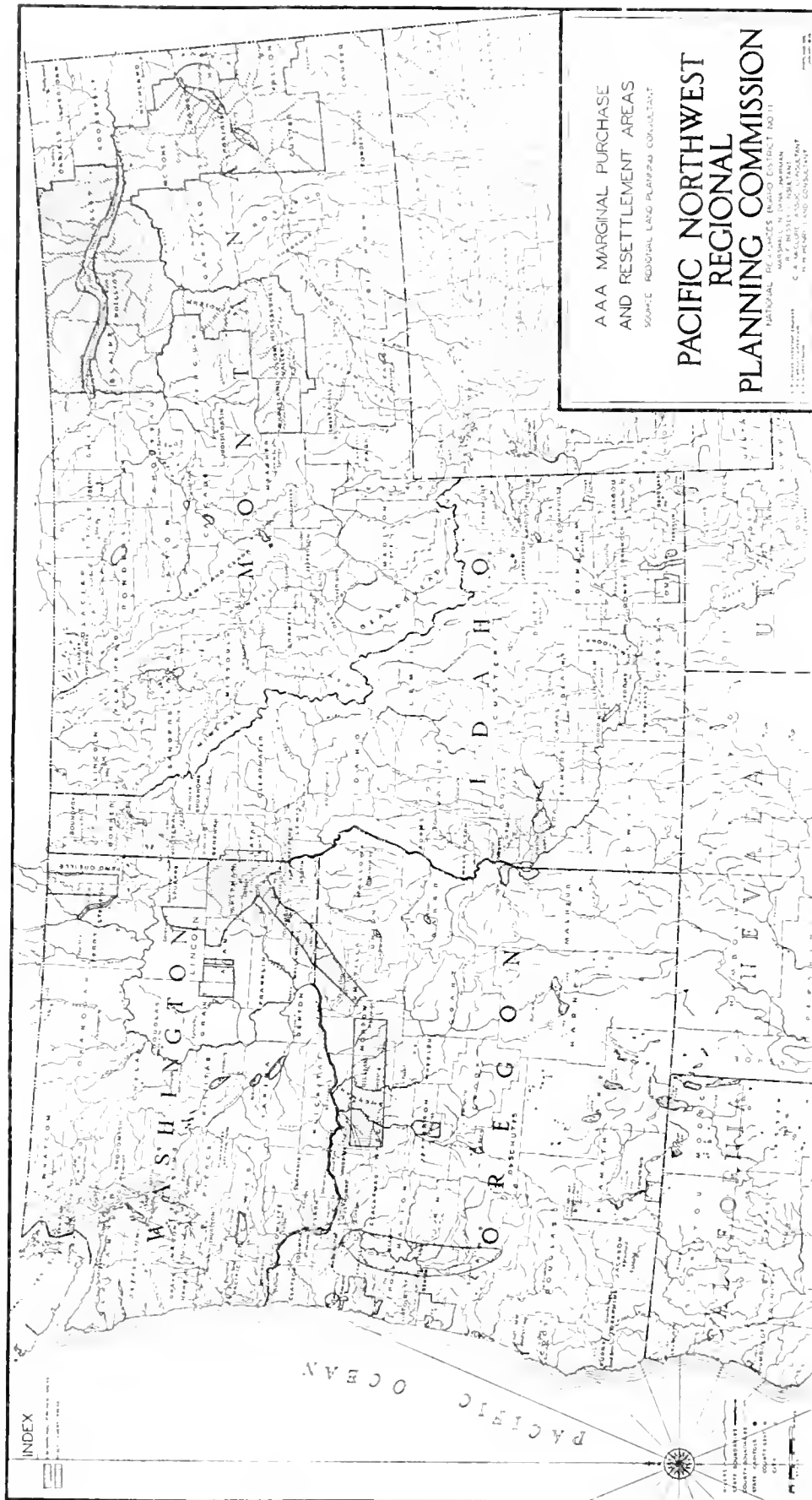
Another important study has been that of a program of "limited motorways" for New England, in which an attempt is made to encourage consideration of highways of modern design as part of a regional system rather than as individual, unrelated roads.

Other surveys and studies made by the commission include population trends; railway transportation facilities and service; highway facilities, traffic flow, and highway accidents; railroad grade crossings; airways program; parks and forests; stream pollution; and legislation affecting planning.

The commission cooperates actively with Federal, State, and local organizations, especially the State Planning Boards, the National Parks Service, the United States Bureau of Public Roads, and the Public Works Administration. Assistance in the form of advice and material has been given to about 90 local planning boards throughout New England. To bring New England planning problems before the public, the commission has issued monographs on population trends, regional highways, and housing.

The commission has encouraged and supported State planning legislation in each of the New England States. All of the New England States have statutory boards.*

* Massachusetts act approved Aug. 9, 1935.—Ed. note.



PACIFIC NORTHWEST REGIONAL PLANNING COMMISSION

COMMISSION ORGANIZED JANUARY 12, 1934

LAWS ENACTED BY FOUR STATES

Organization and Staff

In December 1934 and January 1935 in response to the suggestion of the National Planning Board, State Planning Boards were formed in each of the four States—in Washington and Montana by authority of the legislatures, and in Oregon and Montana by the Governors' appointive power. Sanctioned by the National Planning Board and the Public Works Administration, and sponsored chiefly by Marshall N. Dana, P. W. A. regional adviser, the Pacific Northwest Regional Planning Commission organized and held its first meeting in Portland, January 12, 1934, with the following members: Marshall N. Dana, chairman; D. C. Henny, chairman, Oregon State Planning Board; B. H. Kizer, chairman, Washington State Planning Council; J. S. James, member, Montana State Planning Board; and E. A. Cox, chairman, Idaho State Planning Board. The National Planning Board assigned Roy F. Bessey as planning consultant, and Del Roy Groves, Thomas H. Elliott, and Charles A. McClure, associate consultants. Later, the National Resources Board assigned Harold H. Henry as regional land consultant.

Largely as a result of the efforts of the regional commission, 226 local planning bodies have been created and are cooperating with the commission in the formulation of local plans. Advisory technical committees, corresponding to the National Resources Board's central research and advisory committees, have also been organized for each of the many subjects covered by the commission's studies.

Background and Citizen Support

The hearty support given the commission is evidenced by the fact that approximately 800 representatives of Federal, State, county, and municipal governments and the civic, business, and professional organizations of Washington, Oregon, Idaho, and Montana were registered at the second Pacific Northwest Regional Planning Conference at Seattle in December 1934.

Duties and Functions

In general, the function of the Pacific Northwest Regional Planning Commission is to encourage the

formulation of 10-year master plans for cities, divisions, drainage areas and States in the region, and for the region as a whole, in order "to secure a common-sense appraisal of our natural resources, to identify in their utilization and development a basic group of services and policies, and integrate with these considerations the public works now authorized and to be proposed." The first conference, held in March 1934, made recommendations, many of which have been adopted by the regional planning commission as its general policy. Particularly noteworthy were recommendations favoring:

1. The advance planning of public works, land use, industrial and social development, in cooperation with local and State Planning Boards.

2. Formulation of useful programs of public works for unemployment relief, particularly in areas not affected by industrial recovery and the current public-work program.

3. The preparation and enactment of a standard enabling act for State planning and State planning bodies, as well as for community, city, county, metropolitan, and other district planning, to insure maximum uniformity and cooperation.

4. A comprehensive program for the continuation of the work of surveying and mapping (and dissemination of data, standards, and maps) as a necessary basis for all planning work.

5. Service as a fact-finding and fact-coordinating body, which should not pass upon projects other than planning projects.

6. The continuation of a Pacific Northwest Regional Planning Conference.

Funds and Appropriations

Approximately \$30,000 was provided by the National Planning Board for the first year's operation of the regional office, and approximately \$20,000 for four State planning consultants.

The Oregon Emergency Relief Administration has generously provided personnel for many studies and surveys, and certain chambers of commerce and civic associations have also aided the commission.

PROGRAM AND ACCOMPLISHMENTS

The Northwest Regional Planning Commission regards as one of its most important achievements the formation of technical advisory committees to work with the various State and local planning agencies in the collection and interpretation of basic planning data. Its most significant researches have been in the fields of land, power, and water resources.

The Federal Government is investing nearly \$200,000,000 in power, reclamation, and navigation projects in the Pacific Northwest, particularly at Bonneville and Grand Coulee on the Columbia and Fort Peck on the Missouri. To aid in formulating a coordinated

plan and method for the construction and the profitable use of these projects, the commission has given greatest emphasis to studies and surveys which are of immediate usefulness to the Federal agencies concerned.

With this purpose in mind, progress has been made in gathering factual data in many fields, including land, minerals, water, power, transportation, industry and commerce, public works, welfare, recreation, education and legislation, and local planning. Federal departments, State agencies, State and local planning boards, regional and State technical advisory committees, and many others have cooperated in these studies.

PART III

ACTIVITIES OF STATE PLANNING BOARDS

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INTRODUCTION

Both the National Planning Board and its successor, the National Resources Board, have fully recognized the many difficulties in the task of combining local initiative with that degree of uniformity in the work of State Planning Boards which will advance both State and National planning. The State planning agencies, as they were set up, were encouraged to undertake studies in a great variety of fields, and with the limited staff available in the Washington office advice and assistance have been furnished on such divergent matters as mapping, water projects, housing, and population trends.

When State Planning Boards were assigned general planning consultants, some method of comparing their work and at the same time of providing common policy appeared necessary. Each consultant as he was appointed was therefore required to submit a 6 months' report and other special reports to include at least a land use study, a long range program of public works and studies for the integration of the transportation systems with the States. Later when land planning consultants were appointed, more specific instructions on land studies were issued to provide material for the land section of the December 1934 Report of the National Resources Board.

The result of these instructions and of the general encouragement provided from the central office has been that almost all of the 45 State boards have responded, with detailed reports on these and many other subjects. The State Planning Boards have themselves added to their own fields for research, and have in many ways adapted their programs and their activities to the conditions peculiar to their areas.

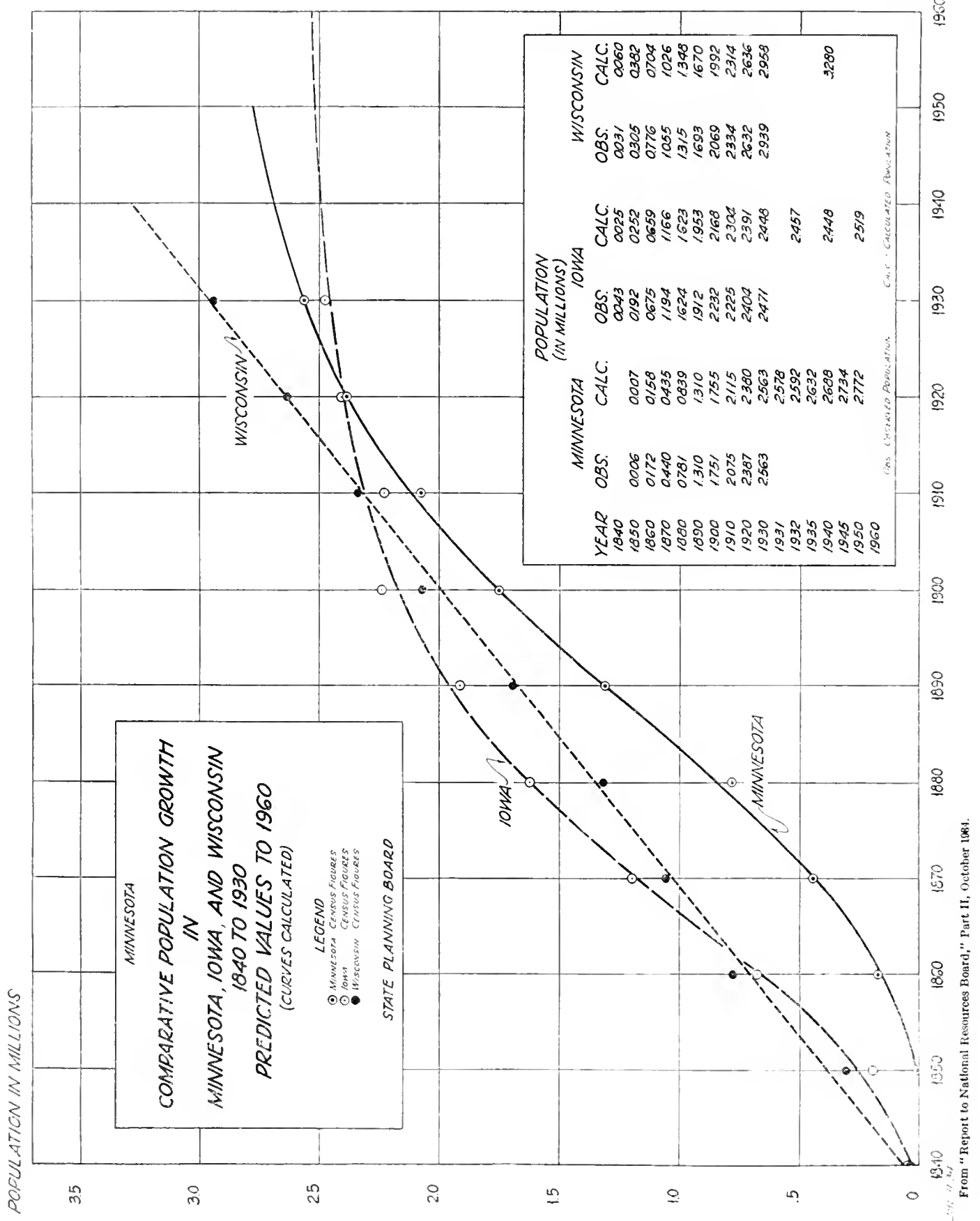
The following chapters are abstracts of the main activities, studies, and recommendations of the State Planning Boards as set forth in their semiannual and special reports to the National Resources Board. Where subjects are here discussed which are properly within the field of State planning, but are not yet conspicuous parts of State programs, the observations of qualified planning specialists have been included.

Since State planning reports are not uniform either in content or treatment, it was difficult to arrive at a satisfactory basis for analysis. Comparison of the reports, however, disclosed many more than just three topics common to almost all reports, and this longer list of common subjects constituted a standard practice outline for purposes of analysis. The reports have been thoroughly broken down according to this outline and later reorganized under the chapter headings of this section. It is hoped that this analysis will provide not only a record of State planning progress, but also suggestions for procedure and developing techniques.

To point a direction for the organization of this material, as well as to secure the benefit of the experience of those most practiced in the planning field, general statements on selected topics were requested from members of the Washington staff of the National Resources Board and from State planning consultants. From these two sources—State planning reports, and the authoritative statements of qualified technicians—the various chapters of the activities section were prepared.¹

The value of this report on the activities of State Planning Boards lies in the fact that it brings together in concentrated form the planning experience and widely varied information of a number of boards. It is hoped that existing planning agencies, and indeed all those who are interested in the developing technique of planning, will find here interesting source material as well as some basis for comparison of various planning methods.

¹ All state planning board reports referred to in this volume (see list on page 294) are on file in the office of the National Resources Committee. They are usually prepared by the state planning consultant, assigned to the board, and are in most instances formally approved by the State board. The exact status of each report as to authorship and acceptance or approval by the board concerned is, of course, indicated in the original report, to which exact reference is usually made by footnote. All quotations or recommendations attributed to the various boards are believed to represent the clear intent of the board in each particular case, but the reader is referred for full context to the original report.



1. BASIC DATA

All of the earlier reports of State Planning Boards are largely concerned with what might be called basic data—the presentation of factual material on population, mapping of existing conditions, and studies of climate. Most of these data had previously been collected and compiled by other Federal, State, and private agencies, but it remained for the planning boards to present a concise and composite picture of the material available and to point out deficiencies.

If State planning were to stop with only the collection or inventory of present assets, the work would be well

worth while. But planning implies and means suggestion of a new design for the better use of the human and natural resources of the State. The State Planning Boards are concerned not only with what is, but with how far and in what directions changes are possible or desirable. Human forces, for example, seem to be subject to many shifts and changes but the topographical distribution of land and sea, hill and valley, are relatively fixed. The State Planning Boards wisely started their work with surveys of existing conditions and trends.

POPULATION STUDIES

Introduction

Population considerations profoundly affect many departments of planning activity. Population studies, therefore, have not only constituted a conspicuous part of State Planning Board researches, but have also served as the background for many other studies.¹

The constant shifts of population, both in numbers and composition, necessitate continual readjustments in programs of public construction and improvement. The properly planned development of many classes of public improvement requires, therefore, thorough analysis of population data in order to determine trends indicating future conditions. This is particularly true of school and highway construction, for which future requirements must be ascertained with some accuracy. For example, sizes and types of schools will depend on the number and age characteristics of the future school population and the general population pattern will govern the location and design of highways.²

Typical of the many broad surveys undertaken by State Planning Boards is a project of the Iowa State Planning Board which made (1) an inventory and description of the human and social resources of the State, including significant changes in the numbers, composition, and distribution of the population, and (2) a statement of certain social problems which have arisen to limit the successful functioning of the social machinery, the sources of these problems, and suggested methods for their solution.³

Many charts, diagrams, tabulations, and maps depicting trends in population growth, characteristics, and movements, were prepared by State Planning Boards. Graphic methods of analysis provided a

practical means of visualizing trends not otherwise apparent. The influence of future population trends upon the economic and social structure of a State is not always discernible, but as the New York State Planning Board has concluded, careful appraisal of these trends is necessary if future waste of public and private funds is to be avoided, and it is only by searching and continued studies that the State can hope to achieve harmonious development of its natural and human resources.⁴

Sources of Data

A rather wide variety of population data is obtainable by the census method: People may be counted as they are born, reach certain ages, marry, and die; where they sleep, eat, work, are educated or play, where they engage in business, and while they are in transit.

Because of the technical and physical difficulties of prosecuting a special purpose census, and the hazard involved in interpretation of hastily taken enumerations, all State Planning Boards have made wide use of returns of the United States Bureau of the Census. As the Pacific Northwest Regional Planning Board has noted,⁵ these returns have furnished and must continue to furnish the greater part of the data used for studying population and its characteristics, although the board has recommended that future censuses be coordinated, so far as practicable, with planning needs.

Within the last 5 years, however, many of the trends indicated by the census of 1930 appear to have been broken or altered. Both the Missouri State Planning Report⁶ and the Pacific Northwest Regional Planning Board⁷ have recommended that a general population

¹ Progress report of the Virginia State Planning Board, Mar. 31, 1935, vol. 1, pt. III, p. 1.

² A study of Wisconsin, Wisconsin Regional Planning Committee, December 1934, p. 24.

³ A Report of Progress of the Iowa State Planning Board, September 1934, p. 237.

⁴ State Planning for New York—Summary of Progress to Gov. Herbert H. Lehman, January 1935, p. 11.

⁵ Problems and Progress, pp. 46, 47.

⁶ A State Plan for Missouri—Preliminary Report, 1934, p. 76.

⁷ Problems and Progress, pp. 46, 47.

census be made by the United States Bureau of the Census in 1935. These boards believe a census of population and unemployment conditions this year would be exceedingly enlightening, and would provide a better basis for forecasting future population size, characteristics, and movements, than census figures now available.

In using returns of the United States Bureau of the Census, the Tennessee State Planning Board found it necessary to make some adjustments for local conditions. In order to obtain the trend in population densities in the State for the years from 1790 to 1930, the board compiled,⁸ after consulting some 30 or 40 old maps, a series of decennial maps corrected for the variations in county lines. With the corrected maps, it was possible to tabulate the density of population by counties from computations made upon the basis of the old maps.

Population returns for Negroes in Tennessee were incomplete for the earlier years, especially 1860 to 1880, and the State Planning Board found it necessary to estimate the Negro population for these years.⁹ Their tabulations therefore do not correspond with the returns of the Bureau of the Census.

Adjustments were necessary also in the use of the term "urban" as applied to concentrations of population in Tennessee. Tennessee is predominantly an agricultural State, and the State Planning Board was of the opinion that many towns of less than 2,500 population (excluded from the Bureau of the Census definition of "urban" population) were of such economic importance as to merit population trend studies.¹⁰ For this purpose, the Board referred to data in the Tennessee State Library and Archives, the Carnegie Library, and the Library of Congress. Data for these smaller communities are now complete.

Faced with a lack of population data suitable for special purposes, State Planning Boards have applied to many different sources for information and assistance. The Kansas State Planning Board¹¹ made use of reports of the Kansas State Board of Agriculture for the years 1884 to 1932, and the biennial reports of the Kansas State Board of Health from 1912 to 1930. In Connecticut, the State Agricultural College and the United States Department of Agriculture cooperated with the Connecticut State Planning Board in a survey of the rural population.¹²

State school censuses were used as a basis for current population estimates by the State Planning Boards in

California,¹³ Colorado,¹⁴ and Pennsylvania.¹⁵ Commenting upon the reliability of the estimates, the California State Planning Board states: "The enrollment in elementary grades has been accepted as a reliable index (of present population). With compulsory enrollment, this one index is almost independent of economic factors. Considered along with the enrollment is the average daily attendance. Both are about of equal advantage."¹⁶

Population Size

The trend in the size, increase or decrease, of a State's population is the algebraic sum of four distinct elements, the trends in births, deaths, immigration, and emigration. State Planning Boards have studied past population records, attempting to note the effects of each of the four elements or trends in producing the existing population situation. Continued study and interpretation of these trends furnish the best basis for forecasting the future population.

Vital Statistics

The Minnesota State Planning Board,¹⁷ after completing a study of population growth, reported that while the rapid increase early in the State's history was due largely to migration, since 1910 the increase has been due chiefly to the excess of births over deaths. The birth rate was about 21 per 1,000 people in 1910. It rose to nearly 25 in 1915, then declined slowly to 20 in 1927, since when it has fallen to 17. The Board assumes that 17 births per 1,000 people would be necessary to maintain a stationary population in Minnesota, not allowing for emigration.

The New Jersey State Planning Board found that the birth rate for New Jersey was relatively constant from 1880 to 1910. It increased, generally, until 1920, after which there was a general decrease, which accelerated rapidly beginning in 1928. The current downward trend of the birth rate has been prevalent only during the past 7 years, with the most pronounced decline during the years since 1929.¹⁸ The board's study of variations in birth rates by counties shows higher rates for the densely populated industrial counties than for the rural counties.

⁸ A Report to the National Resources Board of the Work of the California State Planning Board, January to December 1934, p. 98.

¹¹ Progress Report, April 20, 1935, p. 2.

¹³ Preliminary Report to the Honorable Olifford Pinchot, Governor of the Commonwealth and the National Resources Board, December 1934, pp. 1-37.

¹⁶ Op. cit. p. 98. For complete explanation of the methods to be used in making population estimates from school census returns, see, "Internal Migration in the United States", by C. Warren Thornthwaite, University of Pennsylvania, Press 1934. Part V, p. 33.

¹⁷ Report of the State Planning Board to National Resources Board, November 1934, pt. I, p. 12.

¹⁸ Preliminary Report, Mar. 30, 1935, vol. II, pp. 31-34.

⁹ State Planning and National Resources Report for Tennessee, December 1934, p. 3.

¹⁰ Ibid.

¹² Ibid.

¹⁴ Progress Report, September 1934, p. 30.

¹⁵ A Condensed Report on Planning for Connecticut, Oct. 9, 1934, p. 3.

According to the State Planning Board, death rates in New Jersey, with the exception of the epidemic year 1917, have declined steadily since 1892. In general the death rates have been more constant for rural areas. Until 1890, death rates were somewhat higher in the urban industrial areas than in rural areas, but there have been sharp declines in the death rates in the industrial areas since 1910.

From studies of death rates in Ohio, the Ohio State Planning Board was able to report that there have been no great changes in the crude death rate in the State for the last 20 years. Only a slight decline was in evidence. Public health control in the State has been largely responsible for decreases due to certain diseases. For instance, the tuberculosis mortality rates fell from 150 per 100,000 persons in 1910 to 63.37 in 1930.¹⁹

The Texas State Planning Board²⁰ has suggested that the natural increase of population in Texas can be accelerated by encouraging the removal of families from the cities to the farm, and by a more intensive application of public health measures.

Studies of vital statistics in Kansas have enabled the Kansas State Planning Board to report that a stable death rate and a falling birth rate for the State, when considered with the probability that Kansas must depend upon natural increase for future population growth, plainly forecasts limited population gains in the future.²¹

Migration

While population growth conceivably may be forecast upon the basis of trends in births and deaths, interstate migration may render useless all such calculations. Estimates, only, of interstate migration are possible with data now available. Estimates of the natural increases in a State's population may be forecast from trends in the registrations of vital statistics, but there are no agencies specifically charged with measuring the population changes caused either by interstate or intrastate migration.

The difficulty of obtaining exact estimates of total emigration or total immigration for a State is well illustrated by figures for the State of Maine,²² which between 1920 and 1930 increased in population only 29,409 or 3.8 percent. However, births during this period aggregated 172,343 or 22.4 percent of the State's 1920 population. During the same period there were 112,335 deaths, leaving a natural increase of 60,008 or

7.8 percent of the 1920 population. The difference between this figure and the previously stated total increase (29,409) indicates a net emigration of 30,599. Sufficient data are not available to calculate either the gross immigration or the gross emigration.

Furthermore, this method of calculating net migration depends upon accurate registration of vital statistics, which in many States is a comparatively new governmental responsibility. For instance, in North Dakota complete records of vital statistics for the State are not available for the years preceding 1924.²³

Other methods of estimating emigration and immigration for a State involve the use of United States Census returns on birthplaces of residents by States.²⁴ The North Dakota State Planning Board²⁵ and the Illinois State Planning Commission prepared maps to show the trends of emigration into other States of their own native-born citizens.²⁶ The Illinois State Planning report states that the cumulative loss of its native white population to other States has been greater than its gain.

The importance of migration to the future size of a State's population cannot be overlooked. The Iowa State Planning Board, for example,²⁷ states that Iowa's growth is affected greatly by the movement of people across her boundaries, which varies widely from year to year. If the Federal Government continues its policy of restricted immigration, Iowa, with no undeveloped resources to be tapped, little water power to be utilized, and slight prospect of expanded industrial development in the near future, has little chance of future population increases due to immigration. In fact, the Board feels that Iowa may expect to lose approximately 50 percent of the State's natural increase in population through emigration unless new types of farming, such as subsistence homesteading and part-time farming, are introduced upon a large scale.

The New Hampshire Planning Commission consultant states²⁸ that if a period of prosperity returns comparable to the years previous to 1930, it is doubtful if migration from New Hampshire would take place to any such marked degree as before. Many people during the depression have returned to the State from the metropolitan centers, and have found a more satisfactory way of living. With forces at work for the

¹⁹ Second Progress Report, June 15, 1935, Population, pt. II.

²⁰ More data of interstate migrations are now available to all State Planning Boards in "Interstate Migrations Among the Native White Population as Indicated by Differences Between State of Birth and State of Residence", by Galpin and Maony, Bureau of Agricultural Economics, United States Department of Agriculture. Studies of interstate migrations and suggested methods for its measurement are contained in "Internal Migration in the United States" by C. Warren Thorndyke, University of Pennsylvania Press, 1934.

²¹ *Op. cit.*

²² Report of the Illinois State Planning Commission, December 1934, pp. 5, 40, 42.

²³ A Report of Progress of the Iowa State Planning Board, September 1934, p. 243.

²⁴ State Planning in New Hampshire, Mar. 15, 1935, pp. 26, 28, 29.

²⁵ Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, chap. I, p. 24.

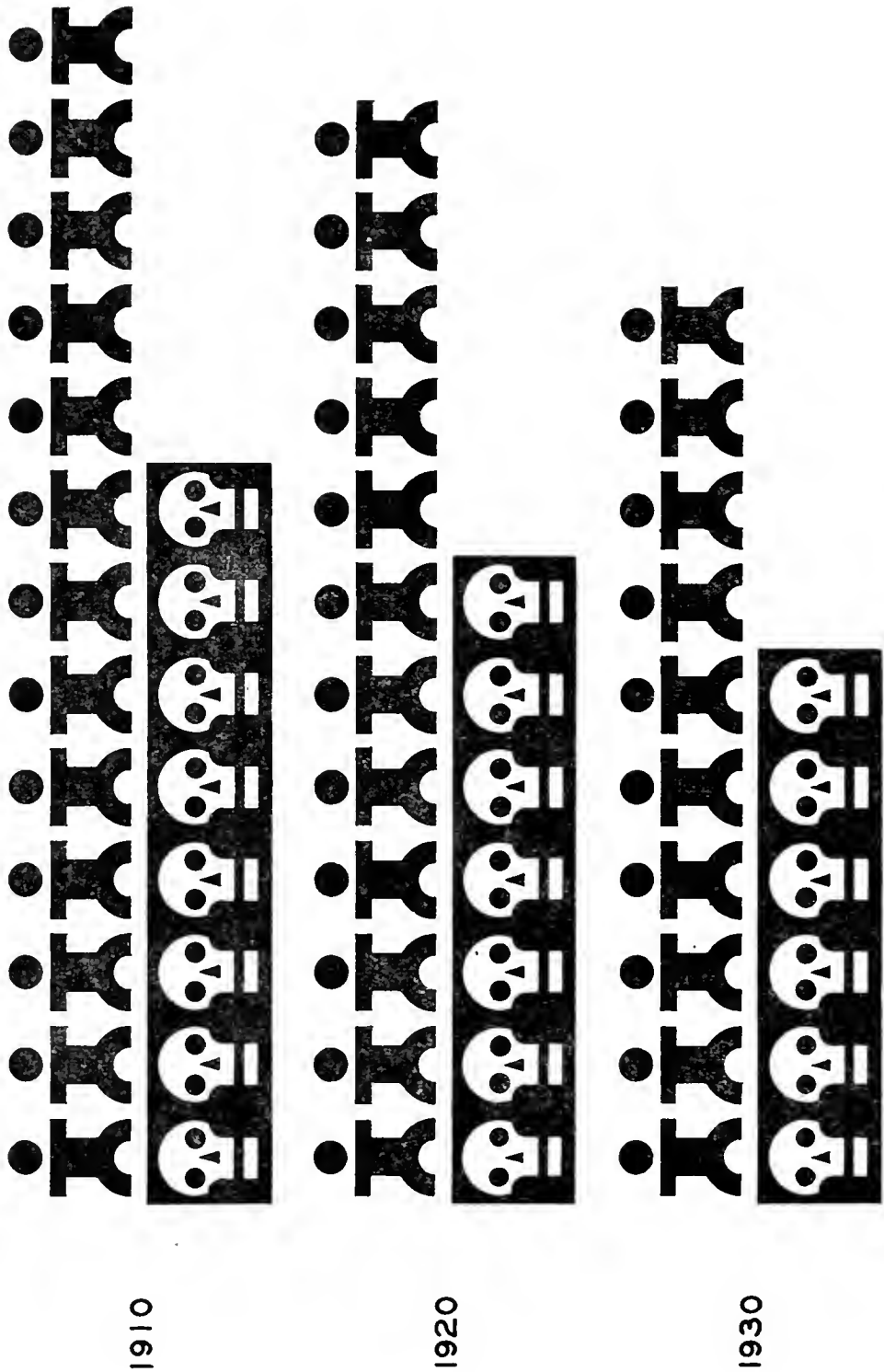
²⁶ Six Months' Report, August 1934, through January 1935, pt. I.

²⁷ Progress Report, Sept. 12, 1934, p. 30.

²⁸ From studies made by Arthur C. Comey, Consultant, Maine State Planning Board.



SOCIOGRAPHICS
PHILADELPHIA



DECLINE IN BIRTH AND DEATH RATES
PER 1000 POPULATION

From "Preliminary Report", December 1934.

development of greater opportunities in the State, fewer young men will be drawn away.

Forecasts

Generally, the growth of population in a particular State will be limited and conditioned by the growth of the population of the entire United States.²⁹ It was necessary, as far as possible, for State planning boards to relate estimates of their future growth to those already made for the entire country.³⁰

Population forecasts for Ohio for the next 50 years were prepared for the Ohio State Planning Board by the Scripps Foundation for Research in Population Problems. Four prognostications were made upon the following assumptions:³¹

1. Life expectancy will increase 5 years, specific birth rates will decline 33 percent, and net migration into the State will equal 87 percent of its natural increase.

2. Life expectancy will increase 5 years, specific birth rates decline 20 percent, and net migration into the State equal 87 percent of the natural increase.

3. Life expectancy will increase 10 years, specific birth rates decline 33 percent, and net migration into the State equal 87 percent of natural increase.

4. Life expectancy will increase 10 years, specific birth rates decline 20 percent, and net migration into the State equal 87 percent of natural increase.

Forecasts, generally based upon the above assumptions, were also made for the rural farm population, the rural nonfarm population, and the urban population, by age groups.

Similar prognostications were prepared by the Scripps Foundation for Kentucky. The Planning consultant which predicted slow growth for the State, and a maximum population of 3,215,000 in 1980.³²

The New England Regional Planning Commission reported there would be a tendency toward stabilization of the population of the entire New England area at about 10,000,000 people in 1990.³³

The Missouri Planning consultant³⁴ predicted a stationary population for Missouri in 1960, while the Illinois State Planning consultant expects a stabilized population in 1960, of about 9,000,000 people, 80 percent of whom will live in urban areas, and 65 percent of whom will be concentrated in cities of more than 10,000 inhabitants.³⁵

The State Planning Board of Minnesota attempted to forecast the size of Minnesota's future population by mathematical methods.³⁶ The board was also able to apply the same technique and obtain forecasts for the populations of the neighboring States of Iowa and Wisconsin. Essentially, the method involves the drawing of a mathematical curve. From observed data and comparison with the established curve, it is apparent that only a small deviation should be expected from the calculations thus made.

From the forecasts, the Minnesota State Planning Board has predicted a maximum population for Minnesota of about 3,000,000 persons, this to be attained in about 30 to 40 years. The board has warned that while the people of Minnesota are safe in relating their plans to a period of slow population increase, they must be alert for a change in the situation. Commenting upon this warning, the board states: "Had one undertaken to forecast the rate of population development for Michigan in 1890, one would have had no guideposts suggesting the meteoric rise of the automobile industry with the resulting great influx of population into the State. No one can forecast when some similar development might take place in Minnesota, but unless or until something novel and spectacular occurs, we cannot expect any great increase in population."³⁷

With regard to its own situation, the Michigan State Planning Board has said: "In total numbers the population of the State of Michigan is unlikely to increase in the future as rapidly as in the past decades."³⁸

The North Dakota State Planning Board estimated the future population for North Dakota, South Dakota, and Montana by fitting curves to observed data of population growth.³⁹ The curve was computed from an equation similar to the Pearl-Reed Growth curve⁴⁰ with the use of the method of least squares. From its calculations the Board was able to conclude that the population of North Dakota has very nearly approached its theoretical limit of about 700,000 people.

The development of land uses will largely determine the future growth of population. The Texas State Planning Board states that Texas is not approaching a static population condition as rapidly as are many of the Eastern and Northern States where land is almost all developed.⁴¹ The board reports "Texas still presents enormous possibilities for growth. Its farm lands on the basis of present usage are scarcely half developed. With bettered and more intensive use of its lands, the support of treble the present population is a very likely possibility, involving a density of only

²⁹ A Progress Report to the National Resources Board on the Making of a State Plan for New York, September 1934, ch. IV, p. 4.

³⁰ National Resources Board Report, Dec. 1, 1934, pt. II, sec. 1.

³¹ Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, appendix I, pp. 3 to 26.

³² Preliminary Report on a Series of State Planning Studies, September 1934, pp. 1-5.

³³ A Plan for New England Progress Report to the National Resources Board, Oct. 1, 1934, p. 11.

³⁴ A State Plan for Missouri—Preliminary Report, Oct. 8, 1934, p. 17.

³⁵ Report of the Illinois State Planning Commission, December 1934, pp. 4, 38, 41.

³⁶ Report of the State Planning Board to the National Resources Board, November 1934, pt. I, pp. 12, 13, 14.

³⁷ *Ibid.*, p. 14.

³⁸ A Preliminary Report on State Planning, September 1931, p. 32.

³⁹ Second Progress Report, June 15, 1935, Population, pt. I.

⁴⁰ See Methods of Statistical Analysis, Davies and Crowder, pp. 151, 152.

⁴¹ Six-Months' Report—August 1934 through January 1935, pt. V, p. 2.

166 persons per square mile solely on its humid to sub-humid area." With respect to total population, only four States exceeded Texas in the returns of the United States Census of 1930.⁴²

State Planning Boards, faced with the prospects of stationary State populations in the relatively near future, considered the effects and possibilities of the situation. The New York State Planning Board believes that with a more stabilized population, the State should be able to plan more wisely. Public developments should suffer less interference from real estate speculation. The State should see more clearly how to apportion its natural, human, and financial resources to activities and purposes which will contribute most toward general social welfare.⁴³

The Iowa State Planning Board states that a stationary population in Iowa will bring greater "stability, less movement of people from place to place, less emphasis upon numbers or size as a criterion of excellence, and possibly more emphasis upon quality of population and equality of living." A stationary population demands a stabilized agriculture, for then land values rise less rapidly, if at all, and there is less need for exploitation of natural resources. Farmers can no longer depend upon ever increasing agricultural markets. While the board expects that "some of the effects of slower growth and the increased age of the population of Iowa may be harmful, particularly if not foreseen and discounted by a planned program", a stationary population may make planning more effective and play an important part in the attaining of a higher standard of living.⁴⁴

Similarly, as the Kansas State Planning Board has noted, the incidence of a stationary population poses the problem of how to raise living standards as a means of creating new markets and establishing a secure social future.⁴⁵

Some estimates of future population made by State Planning Boards are shown in the accompanying table. As it has been noted, estimates for Iowa and Wisconsin were prepared by the Minnesota State Planning Board and estimates for Montana and South Dakota were prepared by the North Dakota State Planning Board.

⁴² *Ibid.*, pt. IV, p. 1.

⁴³ State Planning for New York—Summary of Progress to Governor Herbert H. Lehman, January 1935, p. 11.

⁴⁴ A Report of Progress of the Iowa State Planning Board, September 1934, p. 245

⁴⁵ Progress Report, Sept. 12, 1934, p. 26.

Some Estimates of Future Population

[The unannotated estimates were prepared in State planning board offices]

[Figures given in thousands]

	1940	1950	1960	1970	1980
Colorado ¹	1,100	1,150	1,160	1,120	1,070
Illinois.....	8,500	9,200	9,800	-----	-----
Iowa ²	2,570	2,630	2,660	2,662	-----
Iowa ³	2,448	2,519	-----	-----	-----
Kansas.....	-----	2,000	-----	-----	-----
Kentucky ⁴	2,771	2,919	3,042	3,138	3,215
Michigan ⁵	5,400	-----	6,000	-----	-----
Minnesota.....	2,688	2,772	-----	-----	-----
Missouri ⁶	3,710	3,731	3,690	-----	-----
Montana ⁷	565	578	583	585	-----
New York ⁸	13,250	14,000	14,000	-----	-----
North Dakota.....	691	693	694	-----	-----
Ohio ⁹	7,203	7,678	7,698	7,593	7,235
Pennsylvania ¹⁰	9,734	9,838	9,943	-----	-----
Pennsylvania ¹¹	10,067	10,348	10,410	-----	-----
South Dakota ⁷	713	724	729	734	-----
Tennessee.....	2,850	3,108	-----	-----	-----
Texas.....	6,526	7,228	7,929	8,631	9,332
Virginia.....	2,500	-----	-----	-----	-----
Wisconsin ¹²	3,061	3,303	3,494	3,668	3,831
Wisconsin ¹³	3,280	-----	-----	-----	-----

¹ Based upon a "Medium" estimate by the Scripps Foundation for Research in Population Problems.

² Based upon an "Intermediate" estimate by the Scripps Foundation for Research in Population Problems.

³ Estimate made by the Minnesota State Planning Board.

⁴ Arithmetic mean of 4 prognostications of the Scripps Foundation for Research in Population Problems.

⁵ Based upon estimates made by the Scripps Foundation for Research in Population Problems.

⁶ Based upon a low estimate by the Scripps Foundation for Research in Population Problems.

⁷ Estimate by the North Dakota State Planning Board.

⁸ Based upon an "Intermediate" estimate by the Scripps Foundation for Research in Population Problems.

⁹ Arithmetic mean of 4 prognostications by the Scripps Foundation for Research in Population Problems.

¹⁰ Based upon the State School Census.

¹¹ Based upon the "Intermediate" estimate by the Scripps Foundation for Research in Population Problems. The Pennsylvania State Planning Board suggested a probable population somewhere between the 2 estimates given.

¹² Based upon estimates by the Scripps Foundation for Research in Population Problems.

Predictions of the growth of localities such as counties and municipalities are subject to greater error than forecasts for an entire State. For most purposes of State planning, visualization of the direction of population growth and of urban expansion, or a rough approximation of the probable size of populations at successive future periods, is held to be sufficient for most needs of long range planning.⁴⁶

The Ohio State Planning Board has found that population increase in Ohio in recent years has been limited to those areas covered by, or immediately contiguous to, large industrial centers.⁴⁷ From definite assumptions dependent upon expected fluctuations in birth and death rates and a predicted volume of inter-

⁴⁶ Preliminary Report New Jersey State Planning Board, Mar. 30, 1935, vol. 11, p. 29.

⁴⁷ Major Land-Use Problem Areas and Land Utilization in Ohio, 1935, pt. II, p. 20.

state migration, the total population of certain groups of Ohio cities⁴⁸ was forecast.

After studying the growth of St. Paul and Minneapolis, the Minnesota State Planning Board suggests that population growth there will depend to a great extent upon natural increase, unless something now unforeseen occurs to attract a movement of people to these centers.⁴⁹

By reason of favorable location and other inherent advantages and disadvantages, the New Jersey State Planning Board believes certain parts of New Jersey are likely to realize disproportionate shares of whatever increases may occur in the State's population. These areas the Board is locating by numerous related surveys and studies.⁵⁰

However, in the final analysis it is the relative advantages of a city or State as a place in which to live and to earn that determine the total proportion of the population that it can attract.⁵¹

Population Characteristics

Race and Nativity

The population of most of our States is apparently slowly being molded into one great Anglo-American race. There have been few precedents for such a fusion of racial bloods into a homogeneous nation.⁵²

The State of New Mexico, however, is an exception to the rule, nor does the New Mexico State Planning Board foresee any such amalgamation of races as has occurred in other States.⁵³ This is due largely to the fact that New Mexico has not the great preponderance of Anglo-Americans characteristic of most States, but has instead a high percentage of Spanish-Americans and Indian-Americans. Each of these races is retaining, to a large extent, its original culture. An acceptable State development plan for New Mexico, according to the board, is one in which there will be room for all component cultures there represented.

The Ohio State Planning Board, through its studies of the State's population, has found that in the early days of Ohio's history, only a negligible percent of the population was Negro or foreign-born. By 1850, however, the foreign-born white population had become a relatively important element. Since 1850 the proportions of the various elements of the State's population have been relatively uniform. After 1910, however, there was a marked increase in the percentage

of Negro population, while the percentage of the foreign-born population has been diminishing. These changes have been caused by a migration of Negroes from the Southern States and by international immigration restrictions. Opportunities offered by Ohio industrial areas, especially during the World War, caused a redistribution of the Negroes within Ohio and an increase in their number and percent of total population.⁵⁴

In 1900, the foreign-born population, although heaviest in the northern part of Ohio, was distributed throughout the State.⁵⁵ In 1930 the area of greatest concentration was definitely in the northeastern section, while the percentage of foreign-born people had diminished greatly in almost all other parts of the State. In general, the shift in the foreign-born population was from agricultural to industrial areas, particularly to those areas where intensive industrial growth offered the greatest opportunities for employment. New foreign immigration also tended toward these areas.

The Texas State Planning Board observes that the foreign-born whites are greatly in the minority in that State. Those born of foreign or mixed parentage are being completely and rapidly Americanized, the board believes.⁵⁶ The Mexican population in Texas seems to be decreasing. The Texas State Planning Board states that many Mexicans have returned to their native land during recent years, and it is doubtful whether there will be any great increase in this element of the population.⁵⁷

Age Distribution

The changes in the numbers within the age groups of a population require adjustments in public services. Future requirements for public institutions, schools, libraries, highways, houses, lot subdivisions, potable waters, sewers, and other facilities will be affected.⁵⁸

The increase of the average population age is important because of its general affect on all planning. The Wisconsin Regional Plan Committee has considered four age groups in Wisconsin. They are:⁵⁹

1. The school age group—0 to 20 years. Very little productive work is done by members of this group. They are acquiring experience or training for future productivity.

2. The productive group—20 to 44 years. Although the professional and some service groups begin their

⁴⁸ Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, appendix I, p. 18.

⁴⁹ Report of State Planning Board to National Resources Board, November 1934, pt. I, pp. 13, 14.

⁵⁰ Preliminary Report, Mar. 30, 1935, vol. II, pp. 29, 30.

⁵¹ A Progress Report to the National Resources Board on the Making of a State Plan for New York, New York State Planning Board, September 1934, ch. IV, p. 4.

⁵² Progress Report of New Mexico State Planning Board, Apr. 15, 1935, pp. 1, 11.

⁵³ *Ibid.*

⁵⁴ Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, ch. I, pp. 10, 11, 12.

⁵⁵ *Ibid.*

⁵⁶ Six Months' Report—August 1934 through January 1935, pt. IV, p. 3.

⁵⁷ *Ibid.*

⁵⁸ State Planning for New York—Summary of Progress to Governor Herbert H. Lehman, New York State Planning Board, January 1935, p. 11.

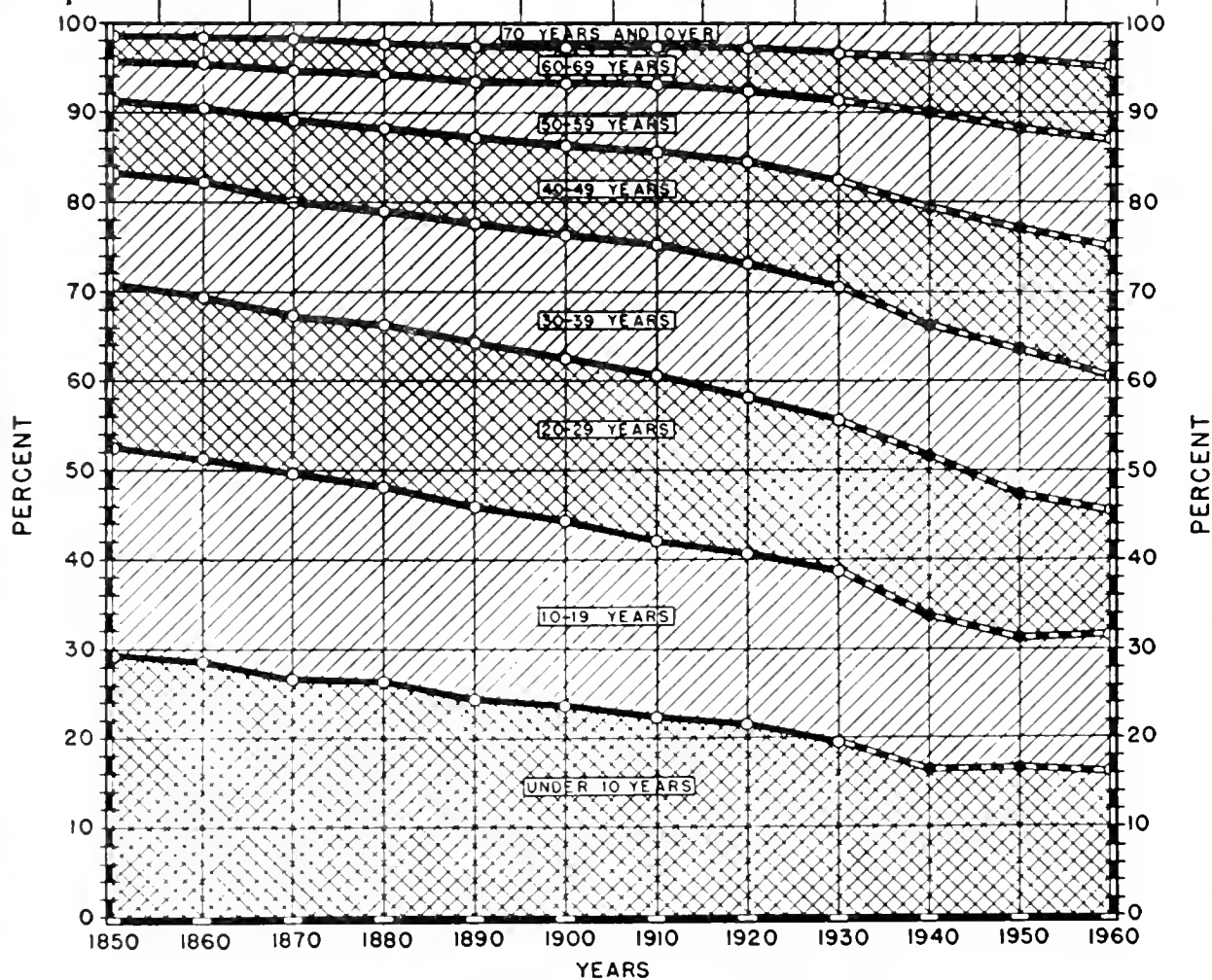
⁵⁹ A Study of Wisconsin, December 1934, pp. 42, 47.

POPULATION

SELECTED AGE GROUP COMPOSITION

WISCONSIN PERCENTAGE DISTRIBUTION 1850-1930. PROJECTED TO 1960.

AGE GROUPS	YEARS												
	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	
70 & OVER	1.5	1.7	1.8	2.1	2.5	2.6	2.6	2.7	3.1	3.8	3.9	4.6	
60-69	2.6	2.8	3.3	3.6	3.9	4.1	4.3	4.8	5.4	6.2	7.6	8.3	
50-59	4.8	5.0	5.8	6.2	6.4	6.8	7.2	7.9	8.7	10.4	11.4	11.5	
40-49	8.0	8.3	9.1	9.1	9.5	10.1	10.6	11.5	12.2	13.3	13.4	15.1	
30-39	12.2	12.8	12.6	12.7	13.5	13.8	14.6	15.0	14.9	14.6	16.5	14.8	
20-29	18.4	18.2	17.7	18.2	18.2	18.3	18.7	17.4	16.9	17.9	15.9	14.1	
10-19	23.4	22.5	22.9	21.4	21.7	20.5	19.8	19.0	19.2	17.2	14.7	15.3	
UNDER 10	29.1	28.7	26.8	26.7	24.3	23.8	22.2	21.7	19.6	16.6	16.6	16.3	



ACTUAL POPULATION ESTIMATED PROJECTION

SOURCE: UNITED STATES CENSUS BUREAU

WISCONSIN REGIONAL PLANNING COMMITTEE - DECEMBER - 1934

productivity somewhat later in life and continue to be productive for a longer period, such groups represent a comparatively small percentage of the total population.

3. The experienced group—45 to 64 years. This group is described as well fitted for semiservice and administrative functions. However, according to present indications, the group will continue to present a difficult employment problem in the future, particularly since it is increasing in size.

4. The dependency group—more than 65 years. Although as in the two previous classes there are many individual exceptions, from this group in the future will come a large percentage of persons requiring public aid because they are no longer economically self-sustaining.

The regional plan committee points out that any change in the rate of population growth caused by fluctuations in birth rates, death rates, or migration causes a relative increase or decrease in one of the above groups. The committee used a formula for predicting the number of persons within certain age groups. In general the method has been the forecasting of excess births over deaths for a future 30-year period, with due consideration for the year-by-year changes in the ages of groups of persons in the population.⁶⁰

The Kentucky Planning Consultant observes that the decreasing numbers of children of school age and the increasing numbers of persons over 45 years of age will require adjustments in economic, social and political institutions, and that this fact must be recognized in any realistic planning effort.⁶¹

The Ohio State Planning Board, after studying the age grouping of the population of Ohio, has found that the trend toward an older population is very likely to continue, due to the curtailment of foreign immigration, rapidly decreasing birth rates, and the increase in life expectancy.⁶² If this actually occurs, the Board expects these significant social changes:

1. The demand for educational facilities will decrease.
2. The demand for goods consumed by older people will grow, while the demand for goods consumed by younger people will decrease.
3. The present tendency in industry to reduce continuously the age limit of employees will require modification.
4. Old-age pension problems will become more serious.
5. More active types of recreation will give place to quieter types.
6. Since social institutions will be likely to be controlled by older people, it is possible that youth will lose influence both in government and business.

Occupational Characteristics

The future total number of the gainfully employed and their occupational characteristics will depend, in a large measure, upon the future size and age distribution of the population.

"Assuming that the population of the State continues to grow in accordance with the estimates", reports the Minnesota State Planning Board⁶³, "and assuming that the rates of growth of the various groups of occupations continue in the future as in the past without abrupt changes", the following tentative conclusions may be made regarding the growth in the number of gainfully employed in Minnesota:

1. The total number will increase about the same proportion as the population, which means that a relatively small and gradually diminishing increase in total employment is to be expected in the future.

2. The numbers engaged in agriculture, forestry, and in the manufacturing and mechanical industries will increase very little.

3. Transportation, communication, trade, and the domestic and personal-service occupation groups will show substantial increases.

4. The professional-service group will continue to grow in numbers at a fairly rapid rate.

The Ohio State Planning Board made a study⁶⁴ of the trends since 1820 in occupational characteristics of the gainfully employed persons in Ohio. In the early years, agriculture was the principal occupation in Ohio. While the numbers of persons employed in agriculture from 1820 to 1900 increased, the agricultural occupations experienced a radically diminishing rate of increase relative to the total number of gainfully employed, in contrast, for example, with an accelerating rate of increase in the numbers of workers engaged in manufacturing. While the trade and transportation occupations absorbed a considerable number of workers quite early, the increase of this occupational group was relatively slow. It was not until after 1900 that trade and transportation, as well as the clerical occupations, began to assume the proportions of major occupational groups.

Behind these trends and explaining them, according to the Ohio State Planning Board,⁶⁵ lies the story of a changing economy. Before 1880 there was a dominant agrarian culture, in the midst of which the foundations for an industrial era were being laid; after 1880 a definite transition took place from the old economy to the new, and, beginning approximately at 1900, a predominantly industrial and urban era came into exist-

⁶⁰ *Ibid.*, p. 25.

⁶¹ Preliminary Report on a Series of State Planning Studies, September 1934, p. 19.

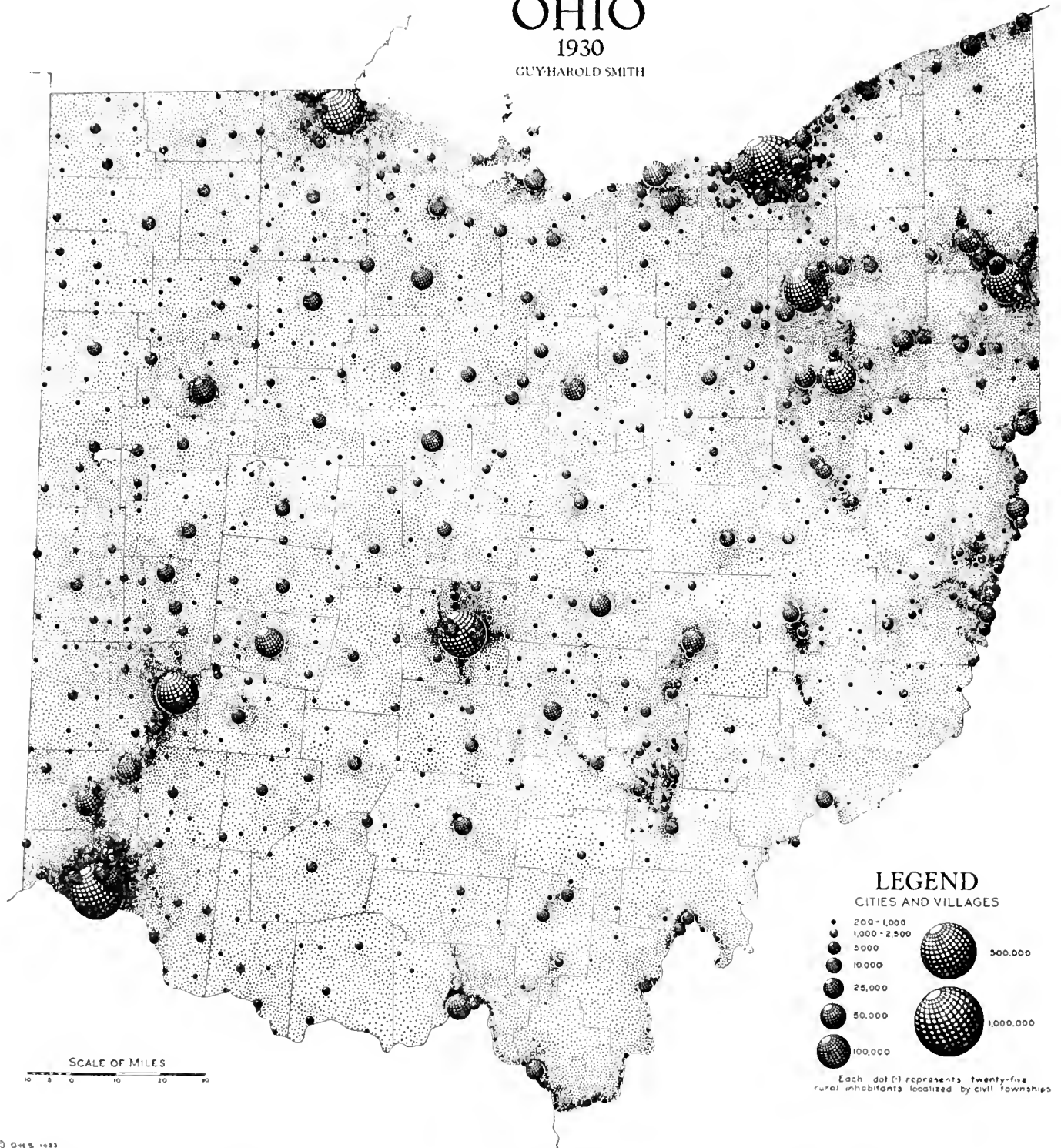
⁶² Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, chap. I, p. 13.

⁶³ A Report of the State Planning Board to National Resources Board, October 1934, pt. II, p. 78.

⁶⁴ Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, ch. I, p. 14.

⁶⁵ *Ibid.*

POPULATION MAP
of
OHIO
1930
GUY HAROLD SMITH



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From "Major Land Use Problem Areas and Land Utilization in Ohio—1935." By permission.

ence in which agriculture has become progressively less significant.

The Ohio State Planning Board studied the distribution of persons gainfully employed in agriculture.⁶⁶ It found that in the northwestern counties, in which some of Ohio's most fertile farm land is located, the number of gainfully employed in agriculture is less than might have been expected, while in the industrial areas in the northeast and the mining areas of the southeast, where conditions are less favorable for farming, there are greater numbers employed in agriculture than would seem consistent. Much of this distorted distribution was explained by the board as being caused by large-scale farming and the increasing use of farming machinery in northwestern Ohio, which reduced the demand for farm laborers; by the demand for fruits and fresh vegetables in the immediate vicinities of large cities, which induced intensive truck farming and dairying in these areas; and by the increased number of people in the southeastern areas who, because of insecurity of industrial employment and the decline in mining, turned to agriculture as a full-time or part-time occupation.

Since 1930 industrial unemployment has introduced new factors into occupational trends. The demand for labor in the large urban and industrial areas has decreased, but with the continued rural-to-urban population migration, which is expected, more persons will seek employment in occupational fields that are already crowded. Future population estimates and the expected changes in age distribution of employable persons will require, according to the Wisconsin regional plan committee, new fields for employment. Education, conservation, and recreation are suggested as possible fields. The committee believes that the occupational trends in Wisconsin may change more in the next three decades than they have in the past. Just as, since 1900, the employable persons in Wisconsin have been less and less engaged in agriculture and more trained and skilled in service and manufacturing occupations, by 1960 the occupational trend of the employable population may be in a quite different direction.⁶⁷

What is true of trends in occupational characteristics in Minnesota, Ohio, and Wisconsin is generally true for the entire United States. Changes in the use of natural resources always have caused occupational changes. Similarly, technological advances in manufacturing with an increased industrial production may place a greater emphasis upon facilities for distribution and the attendant occupations in order that markets may be developed and served.

Population Distribution

Population distribution within a State depends upon numerous interrelated factors, but in some States the factors affecting population distribution are relatively simple.

In New Mexico, for example, the State Planning Board has observed that the population of the State is very unevenly distributed due to the peculiarities of topography and climate.⁶⁸ New Mexico has a semi-arid to arid climate. The rainfall over most of the State is insufficient to produce farm crops without irrigation. The State is rugged and mountainous and contains a large amount of rough, broken land badly eroded and cut by gullies and ravines. The heaviest rainfall is in the rough, mountainous regions, where farming is impossible due to the high altitude, the short growing season, and the rough nature of the ground. Consequently, New Mexico has a low population density and the people are distributed in a pattern dependent almost wholly upon soil and climate.

Population distribution patterns in general are influenced largely by development of natural resources. The New Jersey State Planning Board, after a study of the distribution of population in the State prior to 1890, concluded that the pattern of distribution developed under the influence of the following factors:⁶⁹

1. Relative soil productivity.
2. Location and channel depths of navigable waterways and of ports and harbors.
3. Pressure from metropolitan centers of New York and Philadelphia.
4. Location of railroads, which were determined by the topography and requirements for regional service.
5. Recreational and commercial fishing facilities offered by coastal waters.

Two new factors arose during the 40 years following 1890: (1) Automobile travel, and (2) soil deterioration and the competition of new western farm lands. To these might be added the opportunities for developing mineral and power resources, an important influence in other States.

Following the restriction of international immigration, internal migration has been the process which has formed new patterns of population. Generally, as the Ohio State Planning Board has reported,⁷⁰ population has migrated to areas where industrial and trade opportunities have been prevalent. Areas which have experienced the most migration are those in which mineral and coal extraction have become uneconomical, poor

⁶⁶ Preliminary Report to the National Resources Board, Dec. 15, 1934, pp. 18, 19, 20.

⁶⁸ A Preliminary Report Upon Planning Surveys and Planning Studies for the State of New Jersey, September 1934, p. 10.

⁷⁰ Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, ch. I, pp. 7, 8.

⁶⁷ *Ibid.*, p. 16.

⁶⁸ A Study of Wisconsin, December 1934, p. 60.

farm land has been abandoned, or farms, on good land, have increased in size.

As the Texas State Planning Board has noted,⁷¹ railways and highways recently have been major factors in influencing the population distribution. The automobile has created a degree of mobility unequalled in this or any other country's history. It has enabled industrial areas to command a labor supply regardless of local conditions, and movements between rural and urban areas have been enormously facilitated.

Rural Distribution

The early patterns of population distribution were produced by choice of land for settlement. As long as large amounts of arable land were available for settlement and immigration proceeded without check, population distribution was comparatively sparse and uniform. The industrial expansion of the country following the close of the Civil War, together with the urban movement of the population, introduced problems in land use affecting the rural distribution of population.

Since 1900 there has been a gradual movement from farms to the cities, culminating in the great migrations during the period of industrial prosperity from 1920 and 1930. Part time farming, as the Colorado State Planning Commission has pointed out,⁷² increased near large urban centers. Poor farm land was abandoned. The Indiana State Planning Board estimated, with the aid of the county agricultural agents, the number of abandoned farms in the State.⁷³ In the northern half of Indiana, where the land is relatively good, the average number of abandoned farms per county has been about 10; for the southern half there is an average of 53 deserted farms per county; and in those counties in the rugged and unglaciated section of the State, the average is 105 deserted farms per county.

The Iowa State Planning Board after studying the movements and growth of the rural population reported that, with a few exceptions, counties having good agricultural soil showed an increase or a very small decrease in population during the decade from 1920 to 1930. The poorer soil regions, such as the southern part of Iowa, show a decrease in population usually of about 10 percent.⁷⁴

It is increasingly evident that, apart from the greater opportunities offered by industrial areas to rural population, the abandoning of land for agricultural purposes was also due to technological unemployment in rural areas. This economic condition, usually associated only with industrial production, spread to the farms

with the introduction of farming machinery and the decrease in farm prices following the World War.

From 1910 to 1930 the Pennsylvania State Planning Board reported that taxes on Pennsylvania farm lands increased 159 percent, farm mortgages 85 percent, and investments in machinery and implements 165 percent. To offset these increased overhead charges of agricultural operations an increase of only 47 percent in prices for farm products was reported for the same period.⁷⁵

Some rural counties which have succeeded in maintaining their population during the rural-to-urban migrations have depended indirectly upon urban influences for their stability. The New Jersey State Planning Board points out that the stability of population in many rural townships, especially those of northern New Jersey, has been maintained or increased in some of the more accessible and picturesque areas by the fact that many city employees have established rural residences.⁷⁶

The deterioration of farm lands has introduced a new problem—the marginal and submarginal farmers. Marginal farmers are described by the Virginia State Planning Board⁷⁷ as those who are so near the margin economically and culturally that they are on a subsistence plane of living. In general, it would include those with a gross annual income of less than \$600, with less than a sixth-grade education, living under poor housing conditions, and paying little or no taxes. The board then defines submarginal farmers as the tax delinquent and dependent farmers and those living below the decency level.

The State planning board believes that approximately one-half of Virginia's rural population, even in normal times, may be classed as marginal from the standpoint of income and living standards. From one-tenth to one-fifth may be classed as submarginal or nearly submarginal.⁷⁸

Urban Expansion

The urban expansion in the first 30 years of the twentieth century has been such that in 1930 there were 93 cities in the United States with a population of 100,000 or more, containing about 30 percent of the country's total population. These cities had an incorporated area of about one-tenth of 1 percent of the total land area of the continental United States. The total urban population (living in cities of 2,500 or more) comprised 56 percent of the total population and lived upon a land area of only about one-half of

⁷¹ Six Months' Report—August 1934 through January 1935, pt. IV, p. 5.

⁷² Preliminary Report to the National Resources Board on State Planning in Colorado, August 1934, pp. 15, 16.

⁷³ Preliminary Report, 1934, p. 69.

⁷⁴ A Report of Progress of the Iowa State Planning Board, September 1934, p. 48.

⁷⁵ Preliminary Report to the Honorable Gifford Pinchot, Governor of the Commonwealth and the National Resources Board, December 1934, p. ix.

⁷⁶ A Preliminary Report Upon Planning Surveys and Planning Studies for the State of New Jersey, September 1934, p. 11.

⁷⁷ Progress Report of the Virginia State Planning Board, Mar. 31, 1935, vol. I, pt. III, appendix A, p. 172.

⁷⁸ Ibid.

1 percent of the total land area of the continental United States.

While industrial communities have not developed in Minnesota to the extent that they have in the other States, the studies⁷⁹ of the Minnesota State Planning Board in regard to the growth and distribution of urban population are a good example of studies that have been made by various State Planning Boards.

The Minnesota State Planning Board found that many of the cities which developed in the State depended for their growth upon one specific industry. More recently, however, in Minneapolis, St. Paul, and Duluth there have been a larger number of diversified industries. The cities that developed earliest were the flour-milling cities, and exclusive of Minneapolis, these cities experienced their greatest numerical increase in the two decades between 1870 and 1890. Following 1900 their rate of growth diminished rapidly, and by 1930 they appear to have reached their maximum size, a direct result of a reduction in the supply of wheat available for milling in the vicinity of the original flour-milling cities, along with the development of new milling centers outside of the State.⁸⁰

The second group of cities to develop in Minnesota were those directly connected with the lumber industry. Logging and saw mills moved northward in the State as the attack on the forests progressed. It is possible to divide the lumber cities into two groups, those that were settled before 1860 and those settled after 1880. The cities in the first of these groups reached their most rapid rate of population increase during the 1870's. They reached a numerical peak in 1910, and since then they have experienced an actual decrease in population. The younger group of lumbering cities had their more rapid rate of population increase in the 1890's and had not quite reached a maximum population in 1930. The numerical increase in the decade from 1920 to 1930 was relatively slight.⁸¹

Following 1890 a third group of Minnesota cities, directly associated with iron mining, came into existence. Those cities showed the most rapid rate of increase in the decade ending in 1910 and almost no increase between 1920 and 1930. It seems probable to the State Planning Board that neither the lumbering nor the mining cities will increase in population in the future unless or until other industries are developed locally to augment the activity of the present major industries.⁸²

The enormous concentrations of population on small areas of land have introduced many complex problems.

While part of the population was migrating to the urban areas in search of economic opportunities, another group of people was moving away from these centers. The New York State Planning Board has recognized this urban-to-rural movement and believes that it was influenced by the following social and economic factors:⁸³

1. The increased use of the automobile and other inexpensive means of transportation.
2. The more general construction of hard-surfaced roads.
3. The extension of electric lines and telephones and in some cases water mains and gas lines into the rural areas.
4. The shorter work day and the shorter work week.
5. Over-aged workers.
6. Industrial unemployment.
7. Seasonal industries.

Especially did industrial unemployment cause an acceleration of the urban-to-rural movement in the years following 1930. Workers, faced with prolonged periods of unemployment in urban centers, returned to the land in an effort to make a living. However, there are evidences, according to the Missouri Planning Consultant,⁸⁴ that the trend is reversing, and a movement toward the urban centers is again taking place.

In New England, however, the New England Regional Planning Commission believes there is a tendency for people to break away from densely populated areas,⁸⁵ and the medium-sized city in New England has a more stable population than cities of the same size in the rest of the country.

Future Distribution Trends

Future population distribution trends depend in a large measure upon the forces brought to bear upon the development of the country's natural and industrial resources.

The Iowa State Planning Board finds that huge Federal public-works undertakings—the building of dams, power developments, and recreational areas—are admirably suited to the purpose of drawing people away from regions where opportunity is declining.⁸⁶ The board suggests that, as a technique for this method of population distribution, preference for employment be given to workers from areas of surplus population. However, the board further recommends that public works be undertaken in “promising” areas so that their populations may be retained and prevented from making migratory movements.

⁷⁹ Miscellaneous Reports, the Rural-Urban Movement in New York State, p. 11.

⁸⁰ A State Plan for Missouri—Preliminary Report, Oct. 8, 1934, p. 9.

⁸¹ A Plan for New England—Progress Report to the National Resources Board, Oct. 1, 1934, p. 11.

⁸² State Plan—Iowa State Planning Board Report, April 1935, pt. III, p. 21.

⁷⁹ Report of the State Planning Board to the National Resources Board, November 1934, pt. I, p. 13.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Ibid.

The Idaho State Planning Board has considered a movement of farm population which might take place from the Middle West to Idaho and other north-western States.⁸⁷ If this should occur it might lead to additional lands being brought under cultivation, or to the breaking up of large farms into smaller units.

Future land utilization will govern a great part of the future population distribution. The New Jersey State Planning Board has made a preliminary study⁸⁸ of the subject with regard to present urban areas, areas of most probable urban expansion, lands suitable for continuing farming, and land of low agricultural value which might be better suited to another use.

The New Hampshire State Planning Commission Consultant expects⁸⁹ towns and cities along main highways and railroads to retain their present population, and the strictly rural areas and less accessible towns to show a steady decrease in population. The commission expects urban centers to gain slightly, while the majority of the present sparsely settled rural areas will continue, undoubtedly, to lose. The greatest gains in population may be expected in the areas surrounding the present centers of population.

The Texas State Planning Board believes there will be a gradual increase in intensity of cultivation in rural areas and a reduction in the acreage per family. Increased rural nonfarm population densities are expected.⁹⁰

Recommendations

For adequate planning purposes, the New Hampshire State Planning Commission Consultant believes that a more detailed knowledge of a State's population is required than that furnished by the usual returns of the United States Bureau of the Census. The consultant is considering a request to the Bureau of the Census that, upon the completion of all tabulations in Washington, all material regarding New Hampshire's population be loaned to the commission for further study.⁹¹

The Iowa State Planning Board recommended:⁹²

1. Further localization of population problems should be accomplished by the further subdivision of available data and by classifying it upon the basis of minor civil divisions.

2. Population data should be combined in such a way as to define and characterize any significant popula-

tion areas with common characteristics or any gradient with respect to population growth and development.

3. Some means should be established in Iowa for regular annual measurement of population movement, both intrastate and interstate. A permanent cooperative State and Federal arrangement should be set up with the Division of Farm Population and Rural Life or with the Bureau of Crop Estimates for such annual estimates.

4. Serious consideration must be given to maintaining and improving the quality of Iowa population. A study should be instituted to discover sources of pertinent data and to institute such researches as seem warranted.

5. The reasons for changes in migration and in other population factors should be studied.

It has been previously noted that the development of natural resources and the improvement of transportation facilities affect population growth, characteristics, and distribution. The Pacific Northwest Regional Planning Board, recognizing this fact, proposes the following studies to determine the effects upon population:⁹³

1. Land areas, their classifications and direct supporting power.

2. Potential mineral development.

3. Potential power development.

4. Potential transportation development.

5. Industries and employment induced by maximum occupation and use of land, and by mineral, power, and transportation development.

Studies of vital statistics are necessary if forecasts of the future trends of these factors of population growth are to be made. The Kansas State Planning Board recommends that studies be made of deaths by causes, by age groups, and by occupations.⁹⁴

Since the North Dakota State Planning Board believes that whatever population increases may take place in the future will occur largely in the cities, the Board has recommended a study of urban areas and village growth, with the special purpose of indicating trends in sizes.⁹⁵ Changes in population of counties would be considered from the standpoint of source of immigrating and emigrating population, their origins and destinations, and their financial conditions.

Continued interstate migration may decrease a State's population, and the Illinois State Planning Consultant considering the State's losses of native white population, has recommended that measures be taken to attract desirable populations from other States and countries.⁹⁶

⁸⁷ Six months' Progress Report, June 5 to Dec. 5, 1934, p. 7.

⁸⁸ A Preliminary Report Upon Planning Surveys and Planning Studies for the State of New Jersey, September 1934, p. 60.

⁸⁹ State Planning in New Hampshire, Mar. 15, 1935, pp. 27, 28, 29.

⁹⁰ Six Month's Report, August 1934 through January 1935, pt. V, p. 6.

⁹¹ State Planning in New Hampshire, Mar. 15, 1935, p. 30.

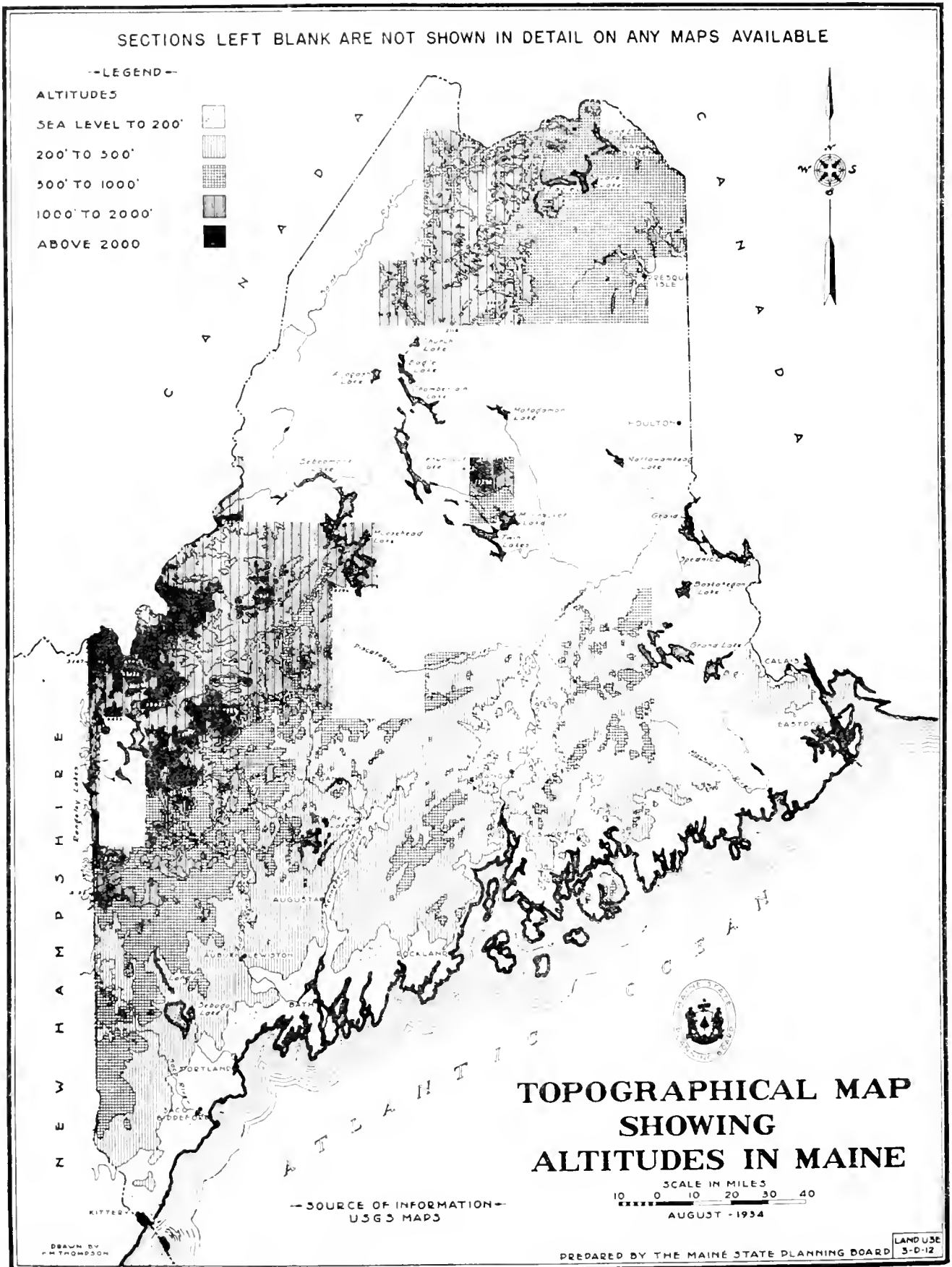
⁹² A Report of Progress of the Iowa State Planning Board, September 1934, pp. 265, 266, 269.

⁹³ Consultant's Report on Regional Planning, January 1935, pp. 45, 46.

⁹⁴ Progress Report, Sept. 12, 1934, p. 29.

⁹⁵ Preliminary Report—Population, April 1935, pp. 8, 10, 11.

⁹⁶ Report of the Illinois State Planning Commission, December 1934, pp. 5, 40, 42.



The Minnesota State Planning Board is of the opinion that even if international immigration restrictions were lifted, there would be no large increase of population in the United States.⁹⁷ The board states that France, England, the Scandinavian countries, and Germany all have stationary populations at present, so that no large influx of people is to be expected from these countries. The board believes that under existing conditions, it is unlikely that economic advantages in the United States are sufficient to attract large waves of immigration similar to those of earlier decades.

The future trends in the population of the Nation, a State, or a local area can be predicted with accuracy

⁹⁷ Report of the State Planning Board to National Resources Board, November 1934, pt. I, p. 13.

BASE MAPS FOR STATE PLANNING

Present Status

Only 26 percent of the area of the United States has been covered by standard topographic maps.⁹⁸ Fortunately, within this mapped area are most of the States of largest population, such as New York, Pennsylvania, Maryland, Delaware, Ohio, Illinois, and California. While mapping activities have been of little concern to planning boards in these States, in almost all of the other States the need for adequate base maps has been a primary concern of the State Planning Board.

The Pacific Northwest Regional Planning Board⁹⁹ summarizes this need among the States in reporting that "In common with much of the United States, the Pacific Northwest region is inadequately mapped. Steps should be taken to carry on the topographic mapping to completion within a reasonable period of time and in accordance with priorities as to areas based upon planning needs. Accurate and uniform base maps are essential to the majority of planning studies, including those for land use, flood and erosion control, irrigation, development of mineral resources, and transportation. The use of aerial surveying to expedite mapping is urgently recommended."

Among the State boards recommending the continuation of mapping activities by the Federal Government are Arkansas,¹ Idaho,² Indiana,³ Texas,⁴ and New Mexico.⁵ The Kansas State Planning Board⁶ recommends replacement of the old 50-foot contour interval maps on a scale of 1:125,000 with 20-foot contour

only when the motives which impel the social and economic conditions affecting population growth and migration are known and when the future changes these motives are likely to undergo have been analyzed. State Planning Boards, as has been indicated, propose continued study and analysis of these motives.

The extreme mobility of the present population has introduced questions into our national life that transcend political and geographical boundaries. The skill with which these questions will be solved depends upon the degree and effectiveness of the cooperation among State Planning Boards and upon recognition that local population problems often are closely related to national problems, and arise from social or economic tendencies with more than local significance.

interval maps on the same scale, and preparation of 2-foot interval topographic maps on a scale of 1:24,000 of all major stream valleys. The Minnesota State Planning Board⁷ recommends that "standard cooperative topographic mapping of the State's area * * * should be resumed and continued until at least those portions of the State in which the solution of conservation problems appear most pressing have been covered." The Missouri Planning Consultant⁸ advises the completion of United States Geological Survey maps "under the supervision of the State geologist, and the New York State Planning Board⁹ urges the State to "cooperate with the United States Geological Survey in supplementing existing control data to establish an adequate and accurate State-wide control system, to make possible the construction of aerial maps or mosaics, revised topographic sheets, large scale urban and local maps for planning purposes and base maps for local tax-assessment purposes."

Federal Aid and State Participation in Completing the Mapping Program

The State Planning Boards of Oklahoma¹⁰ and Oregon¹¹ have advanced their State topographic surveys with Federal emergency funds and the Wisconsin Regional Planning Commission¹² recommends the expenditure of State funds to supplement Federal funds in advancing the State mapping program. The well-established and general need for adequate maps in advance, of planning procedure is well expressed by

⁹⁸ Cf. pt. IV, December 1934, Report of National Resources Board.

⁹⁹ Pacific Northwest Regional Planning Board, Problems and Progress, p. 44.

¹ Arkansas State Planning Board, Preliminary Report, pp. 285, 286.

² Idaho State Planning Board, Progress Report, December 1934, p. 10.

³ Indiana State Planning Board, Preliminary Report, 1934, p. 63.

⁴ Texas State Planning Board, Preliminary Report, August 1934, through January 1935, pt. VI, p. 24.

⁵ New Mexico State Planning Board, Dec. 15, 1934, p. 15.

⁶ Kansas State Planning Board, Progress Report, Sept. 12, 1934, pp. 122, 123.

⁷ Minnesota State Planning Board Report, October 1934, pt. II, p. 41.

⁸ Missouri State Planning Board, Preliminary Report, 1934, p. 76.

⁹ New York State Planning Board, Summary Report to Gov. H. H. Lehman, January 1935, p. 30.

¹⁰ Oklahoma State Planning Board, Preliminary Report, Sept. 7, 1934, p. 129.

¹¹ Oregon State Planning Board, Construction in Oregon, March 1934, p. 12.

¹² Wisconsin Regional Planning Commission Report, 1935, p. 15.

the Wisconsin commission¹³ which states: "Under ideal conditions a topographic or aerial base map should be available before any special type of field survey is undertaken. The work can be more intelligently planned and more economically conducted if accurate base maps are available. Lacking base maps, considerable areas have been mapped as a necessary part of the task of collecting data of various types. The principal surveys in recent years have been soil, geological, and the land economic inventory."

State Mapping Accomplished Through County Map Program

The Wyoming State Planning Board¹⁴ proposes the preparation of county maps of uniform specifications. It reports that "at present maps of Wyoming counties are of different scale and many of them omit necessary or valuable information. The roads and highways often are not accurately placed and frequent changes made by the county commissioners are not always carried to the maps. In making uniform maps we are also showing location of country schoolhouses, principal reservoirs, etc."

The Oregon State Planning Council¹⁵ provides a general summary of the principal physical data, which, in its opinion, are needed on base maps for State planning. These are:

1. Reasonably accurate base maps showing the location of waterways, railroads, highways, cities, towns, habitations, schools, power lines, telephone lines, rural industrial plants, dams, reservoirs, irrigation and drainage ditches, and legal subdivision boundary lines.
2. Topographic maps showing elevations, contours, and slope by classes of steepness and roughness.
3. Detail soil maps showing classification of the various soils according to their physical and chemical properties.
4. Climatic maps showing from existing data the amount of rainfall, length of growing season, and other pertinent data, such as amount of sunlight and velocity of wind.
5. Cover maps showing in reasonable detail the present types of cover found upon the land.
6. Maps and tabular material showing ground water, stream flow, reservoir sites, and other similar data indicating available supplies of water for domestic use and irrigation.
7. Maps and tabular material showing crop indices or relative yield figures for each principal crop on each soil type.

8. Maps showing areas subject to overflow and supplementary tabular data showing usual overflow dates, duration of flood, etc.

9. Maps showing areas susceptible of improvement by drainage and tabular material showing cost and benefits of such drainage.

Transparent Maps

One method of map utilization employed by various State Planning Boards is, perhaps, worthy of specific mention. This is the use of a series of transparent maps of the same scale which show, when superimposed one upon another and over a strong light, the cumulative effect of the various classes of information depicted. For instance, in studies of urban housing these maps showing such items as location and incidence of homicides, felonies, fire losses, death, tuberculosis, etc., will, by superimposition, plainly indicate areas where such social and economic losses are at a maximum.

Composite Maps

In Connecticut a "composite map" of the State was prepared. This map indicates the location of highways, forests, hunting and fishing areas, golf courses, pedestrian trails, bathing beaches, camping areas, aviation fields, and sites of scenic and historic value. It was compiled from information available in the various State departments and agencies and has proved to be of great value to the State Planning Board, under whose direction it was prepared.

Township Maps and Drainage and Watershed Area Maps

Under the direction of a committee on surveys, maps, and plans of the Iowa State Planning Board,¹⁶ more than 550 township base maps have been made. These supplement similar township maps previously compiled, so that now the State has a complete and uniform set of township maps for a total of 1,632 surveyed townships. The information presented includes drainage features, such data as cities and towns, rural, primary, and secondary country roads, dwellings, churches, and schools. These maps are in wide and increasing use by the various State agencies.

The Connecticut State Planning Consultant¹⁷ reports progress being made upon drainage or watershed maps. When this work has been completed there will be available "accurate drainage or watershed maps of the entire State."

¹³ Wisconsin Regional Planning Commission Report, 1934, p. 16.

¹⁴ Wyoming State Planning Board, Preliminary Report, September 1934.

¹⁵ Oregon State Planning Council, Program to End of 1935.

¹⁶ Iowa State Planning Board, Report of Progress, September 1934, p. 163.

¹⁷ Report of the Connecticut State Planning Board to Gov. W. L. Cross, Dec. 15, 1934, p. 11.

The Use of Aerial Photography in Base Mapping

The use of aerial surveys in the preparation of State planning studies is meeting with growing favor among many of the States which report encouraging results in their usage. In a number of the States, notably Ohio and Connecticut,¹⁸ the aerial photographic squadrons of the National Guard or State militia have cooperated in the flying and compilation of these maps, and in so doing have contributed material assistance to their respective State Planning Boards.

The Wisconsin Regional Planning Commission¹⁹ reports, "The advantages of the aerial method of mapping are as follows: (1) An accurate base map is made available at a low cost for the use of the public and all State departments; (2) copies of the actual aerial photographs would be of great service to the conservation commission, the highway commission, and to the public service commission; (3) the base map will be available for the later mapping of topography."

Federal Aid in Aerial Mapping Invoked

The Idaho State Planning Board²⁰ requests "that Federal effort be directed toward completion of airplane photographic surveys", while the Oregon State Planning Board²¹ recommends Federal legislation "to authorize and appropriate funds for an aerial survey and maps of those portions of the State of Oregon for which topographical maps are not now available." The Michigan State Planning Board²² reports the discon-

tinuance by the State of this (aerial survey) work in 1930, leading to the abandonment by the Federal Government of this project in the northern region.

The Indiana State Planning Board²³ states that "complete aerial photographs which may be assembled in mosaics have been made for 15 counties. This is of extreme value to the agriculture of the State and should be completed at the earliest possible date." The Texas State Planning Board²⁴ recommends a complete aerial map of the State at the earliest possible date, and first completion of those sections where the demand is the greatest.

Comments on Base Map Presentation Technique

For the purpose of presenting factual data of State-wide character in their reports, most of the States have prepared a standard State outline base map bearing county names and boundaries. These maps remain sharp and clear when reduced and serve well as base maps. Upon them such facts as population distribution, land uses, resources, land values, soil types, taxation problems, watersheds, topographic differences, climatic variations, governmental subdivisions, vital statistics, recreational facilities, products and industries, and similar general data are effectively presented.

A wide variety of graphical presentation methods have been employed to gain these effects. Standard crosshatching and shading as well as the use of dots have proved most successful. The use of modernistic and conventionalized symbols on many of the maps is a welcome and refreshing trend away from older and less imaginative presentation technique.

¹⁸ Condensed Report on Planning for Connecticut State Planning Board, Oct. 9, 1934, p. 3.

¹⁹ Wisconsin Regional Plan Report, 1934, p. 15.

²⁰ Idaho State Planning Board, Progress Report, 1934, p. 15.

²¹ Oregon State Planning Board, Six Months Progress Survey, July 1934 to January 1935, vol. 1, pp. 21 and 26.

²² Michigan State Planning Board, Preliminary Report, September 1934, p. 56.

²³ Indiana State Planning Board, Preliminary Report, 1934, p. 65.

²⁴ Texas State Planning Board, Preliminary Report, August 1934 through January 1935, pt. VI, p. 24.

CLIMATE

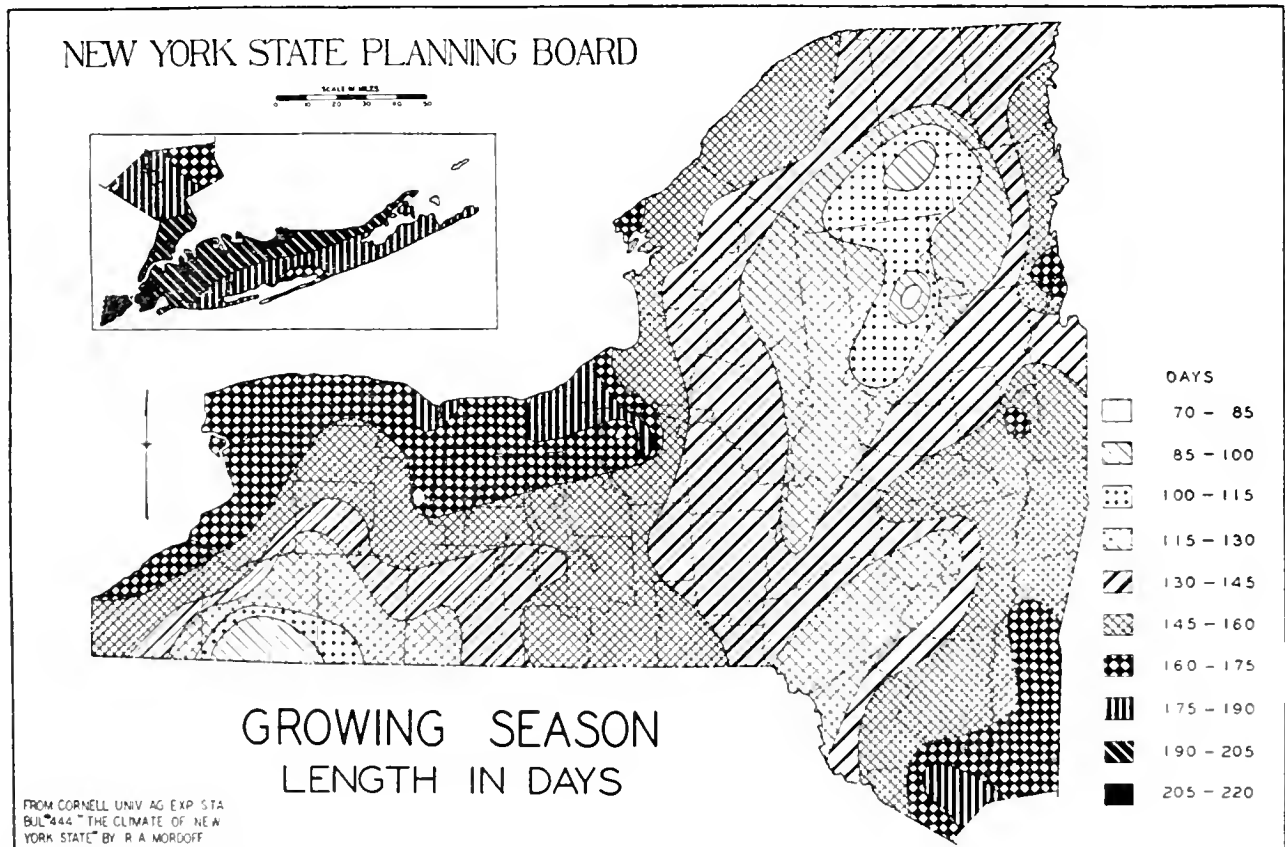
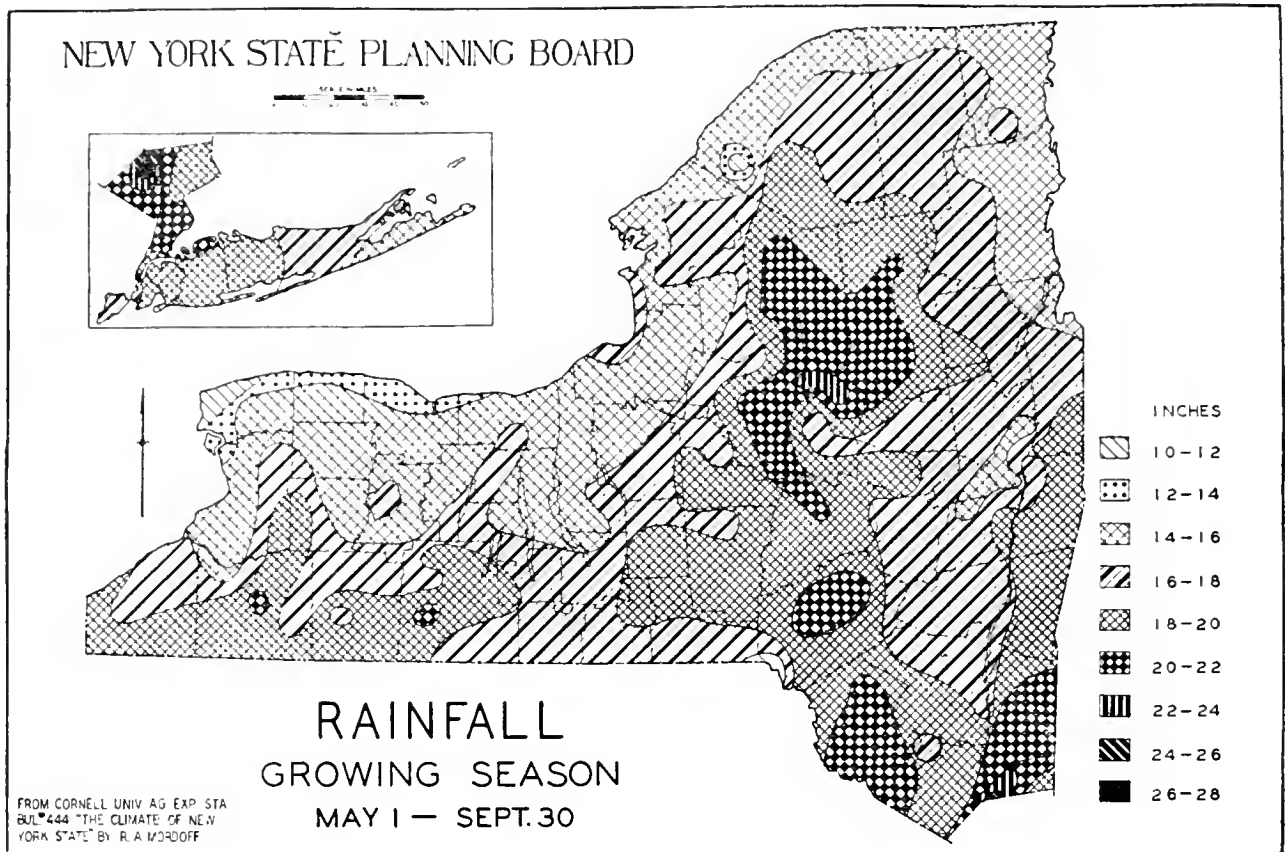
Because of the evident dependence of agriculture upon climate, practically all the State Planning Boards have collected and analyzed the United States Weather Bureau records as a necessary preliminary to the making of plans for agricultural development. The data presented are usually rainfall maps, maps of average annual temperature, maximum and minimum temperature, and length of growing season. In the West more attention is given to rainfall, because of its scarcity, while in the East the length of growing season or the minimum winter temperature assumes greater relative importance.

Needed Data

Many of the State Planning Boards complain of insufficient basic data, but from a comparison of the results obtained in adjoining States it is apparent that

the trouble is largely due to the methods used in reducing the data. The titles of the maps, in most cases, indicate that averages were used. The records at the different stations are for various terms, and the stations are not equally spaced. For these reasons, crude or unweighted averages do not give satisfactory results.

Climatology is concerned with average weather conditions over a period of years for a fairly wide area. Climatic data are derived from analyses of weather records, from which may be determined the areal extent and distribution of certain types of climate. Temperature, precipitation, humidity, and wind are the climatic factors. Combined, they produce for every locality a somewhat distinctive set of climatic characteristics which are the same from year to year and are not known to have changed during historic time.



Precipitation

Typical of many references to rainfall and precipitation in the State planning reports are these from South Dakota, Colorado, Iowa, and Ohio.

"Rainfall has been and is the chief limiting factor to agricultural developments in most of South Dakota."²⁵ Figure 12, in the report of the State Planning Board, is a map showing the normal annual precipitation, varying from less than 15 inches in the northwest corner to 25 inches or more in the southeast corner. Figure 11 shows the "Variations from Normal in South Dakota Annual Rainfall." The variations have been from 8 inches above normal of 20.43 inches to about 6 inches below. There have been more periods of deficient than of excessive rainfall.

"Colorado is well known for its cool summers, particularly in the mountain districts. The mildness of its winters is less generally appreciated. Low winter temperatures prevail at the higher elevations, but in the protected mountain valleys and on the plains near the foothills the winters are far from severe, and, usually, outdoor sports such as golf can be enjoyed until January. Many families from the warmer States spend a long vacation season in Colorado."²⁶

Iowa made a very extended study of rainfall records at 38 stations, for the 39-year period from 1895 to 1933. The details of the computations are not presented, but a map is shown which purports to indicate the precipitation trend. On it the areas of small increase or decrease are comparatively large, while those of large increases or decreases are relatively small. In other words, there is small probability of any great change in the annual precipitation. The actual location of the small spots of greatest increase or decrease is probably due to chance, and a similar study for a different period of time might give a map a decidedly different pattern.²⁷

The Ohio planning report goes into the question of rainfall quite thoroughly. It states that the Ohio rainfall records over the past 50 years have been rather scattered and incomplete, but in this respect, the Ohio records are probably better than those of the States farther west. "Examination of the yearly observed precipitation proves that there were unusually wet and dry spells in earlier periods, as there are now. On the average, the amount and distribution of precipitation have not changed materially."²⁸

"The average annual precipitation in Ohio from 1895 to 1928 was 38.87 inches. The annual rainfall varies from 33 inches in a narrow strip along Lake Erie to 42 inches in small areas in the southern part and the

northeastern part of the State, and ranges from 2½ to 4 inches a month. Rainfall is highest in May, June, and July. Thus, everywhere in the State precipitation is adequate for humid agriculture."

Temperature

The "growing season" is a factor of major climatic importance.

Roughly, this period may be described as the time between the last killing frost in spring, and the first killing frost in autumn. Some classes of vegetation are more resistant to frost than others, so that the period would have to be defined differently for different crops. Neither is it altogether a question of days, but depends upon the hours of sunlight, the angle of incidence of the sun's rays, and the clarity of the atmosphere and its vapor content.

The Arkansas State Planning Board considers a 200-day frostless season the principal requirement for cotton culture. This crop will flourish in areas having widely different average temperatures if the growing season is long enough.²⁹

The New York State Planning Board report contrasts the climate of Long Island and the shores of Lake Erie, with that of the Adirondacks.

Long Island enjoys a growing season that is nearly twice as long as some parts of the Adirondacks because it is surrounded by ocean waters warmed by the Gulf Stream. The shores of Lake Erie and the finger lakes have a long frost free period that is especially favorable for fruit growing, because the prevailing winds in early spring blow over frozen or icy waters, and thus are cooled before touching the orchards. Consequently blossoming is retarded until danger of frost is past. Then at the end of the season, when Lake waters are warm, winds blowing over them are warmed before touching the fruit, and thus protect it from autumn frosts.

The plateau section and the Adirondacks have a comparatively short growing season of between 100 to 140 frost-free days, because of their high elevation.³⁰

The effects of mountains are indicated by the following quotation from the Colorado State Planning Board:

"The length of the growing season in Colorado is as variable as the range in altitude. The longest growing season is found at Grand Junction in the Colorado River Valley, where the average for 20 years is 186 days between frosts. In some of the mountain towns at elevations around 9,000 feet, the growing season is less than 20 days, while at other points of equal ele-

²⁵ South Dakota State Planning Board, Progress Report, Mar. 15, 1935, p. 23.

²⁶ State Planning in Colorado, Preliminary Report, Aug. 12, 1934, pp. 7, 40.

²⁷ Report of Progress, Iowa State Planning Board, September 1931, p. 196.

²⁸ Ohio State Planning Board, Preliminary Report, Aug. 15, 1934, chap. IV, p. 3.

²⁹ Preliminary survey of land utilization and land use problems in the State of Arkansas, p. 1.

³⁰ A Progress Report on the Making of a State Plan, Mar. 1 to Sept. 1, 1934, pp. 2, 8.

vation, the growing season is more than 2 months. At many of the higher altitudes with a short growing season, crops such as potatoes, small grains, and head lettuce mature in less time than is required in other regions. Mountain vegetables are famed for their succulence and command an excellent market.³¹

The report of the New Hampshire State Planning Consultant says:

"The growing season is short. As a result, crops are in danger of late spring and early fall frosts, but hay and forage crops do exceptionally well."³²

³¹ Preliminary Report on State Planning in Colorado, Aug. 12, 1934, p. 8.

³² State Planning in New Hampshire, Mar. 15, 1935, p. 23.

In Ohio, "The average length of the growing season is about 168 days, varying from slightly less than 150 days in a limited area of northeastern Ohio to over 192 days in a narrow strip along Lake Erie. In general, the northern half of the State has a growing season of from 150 to 164 days and the southern half from 164 to 178 days. While the length of growing season may cause some variation in the type of farming in various areas of the State, it is not a factor in determining the profitable agricultural use of any area."³³

³³ Ohio State Planning Board, Aug. 15, 1935, chap. II, p. 2.

2. LAND PLANNING

State Planning Boards through their land-use committees and with the assistance of both their general consultants and land-planning consultants, have made extensive land-use surveys, and studies of soil and cover, agriculture, forestry, reclamation, Indian reservations, and related subjects. The results of some of these studies were reviewed in the December 1934 report of the National Resources Board and are now being published at length in a separate volume. They are,

ADJUSTMENTS IN AGRICULTURAL LAND USES

Almost all of the State Planning Boards have set up special committees on land-use problems and through the land-planning consultants and contacts with the agricultural colleges or experiment stations have made studies and plans for "problem areas." The instructions to land-planning consultants in connection with the December report of the National Resources Board have provided a common basis for these studies but each State Planning Board has adapted and extended these instructions to fit local conditions.

Under the general heading of agricultural uses of land as contrasted to forest, recreation, or other primary uses, many of the State Planning Boards have analyzed present trends, discussed crop distribution, animal husbandry, grazing, and sizes of farms.

Trends

Recommendations for readjustments in agricultural land use were developed out of studies of past and present trends illustrating a variety of causes for existing "submarginal" areas.

The New York State Planning Board finds that a change in farm area has been going on for many years.

"During the 50-year period, 1880 to 1930, the area in farms was reduced by 4,920,000 acres, or an average reduction of about 100,000 acres a year. Of 22,900,000 acres of land in farms in 1880, only 17,980,000 acres remained in 1930. In large measure this decline * * * has been brought about by farm abandonment and the transfer of the more intensive farming operations to more fertile soils. Every step in agricultural progress has made it more advantageous to obtain the food supply by a more intensive use of the more level and fertile areas.

"New York was settled with great rapidity soon after the American Revolution. Many persons were anxious to obtain land, and they settled practically all of the

therefore, reviewed only briefly in the following pages and the length of treatment of these subjects in this report is no measure of their importance nor of the amount of attention given to them by State Planning Boards.

Irrigation and drainage studies, which are treated in this report primarily in the chapter on Reclamation, are also briefly mentioned in the chapter on Water.

land regardless of its quality. * * * Crop yields in some of these areas were never good. * * * Abandonment in most of these areas began almost as soon as settlement was completed, * * * due primarily to topography, soil types, difficulties of access, and changed economic conditions. When the land was settled, * * * population was dense on the Atlantic seaboard, and the pressure of the population on the nearby food supply was much greater than at present. * * * Later, intensive use of more productive land elsewhere in the State and the opening of the west made it difficult for these areas to compete."

This history illustrates the need for reasonably rapid amortization, even in an industry as stable as agriculture is usually considered to be.

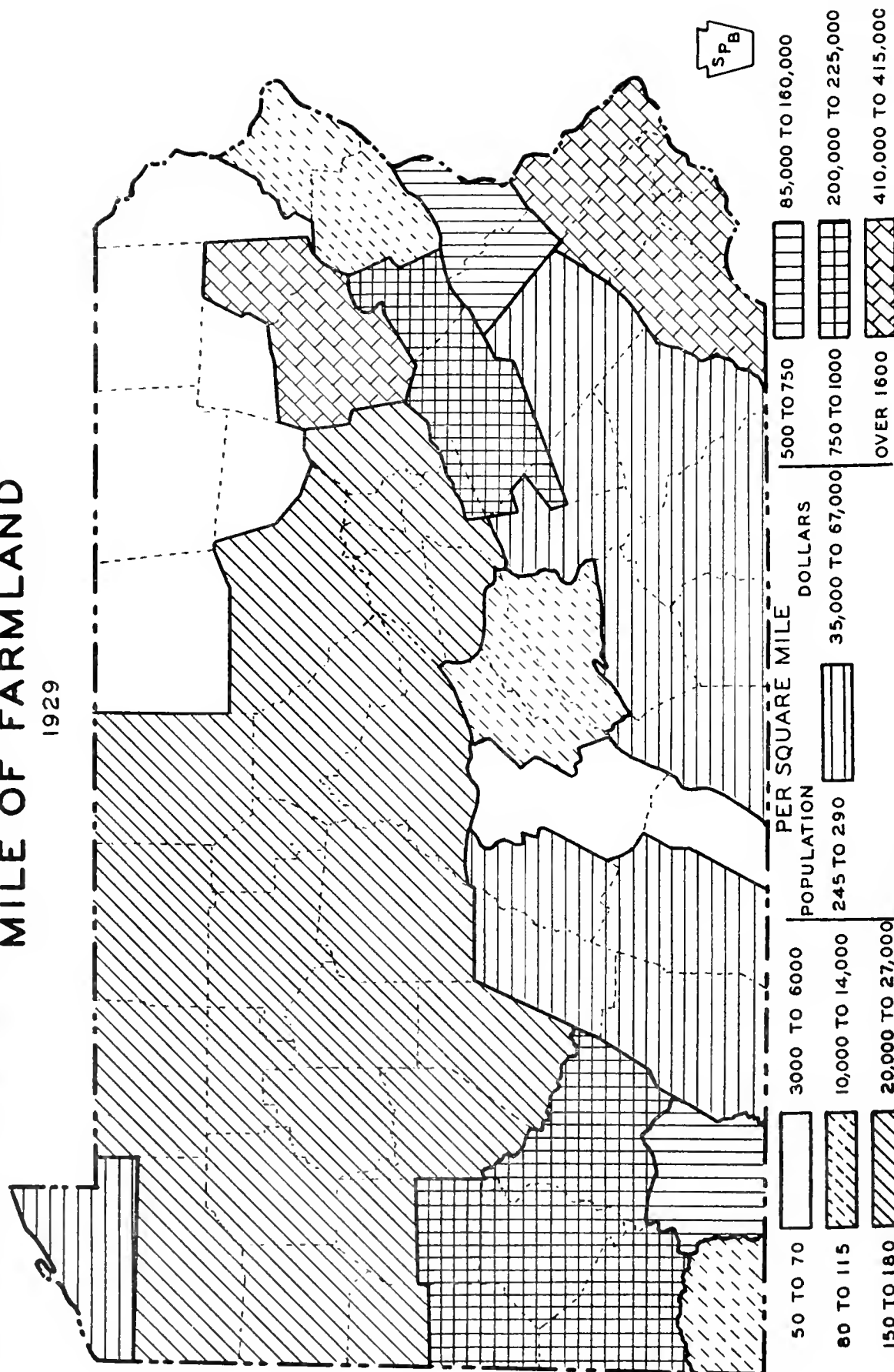
In Ohio, the State Planning Board finds that climate, population, characteristics, and markets are only minor factors in marking out the major rural land use areas. The main factors are soil fertility and topography. In spite of the present low income and living standards of many families in the poorer areas, it is not possible to say at the present time that they would be better off elsewhere. To determine whether it is possible for readjustments to fit these people to their present environment by raising their incomes and making modern living conditions possible, studies have been started which will bring together information on many related subjects, such as present land cover, land use, type of ownership, distribution of population, roads, power lines, tax delinquency, trends in land use, and an estimate of the best possible future use.¹

"The three principal reasons for reduction of farm land acreage in New Jersey" according to the Planning Board "are the intrusion of urban areas or the speculative forerunners of urban development; the shift from farm usage to that of country estates; and

¹ Preliminary Report, Aug. 15, 1934, ch. II, p. 31.

POPULATION AND INDUSTRIAL PAYROLL PER SQUARE MILE OF FARMLAND

1929



PENNA. AGRICULTURAL EXPERIMENT STATION BULLETIN NO. 305.

From "Preliminary Report," Pennsylvania State Planning Board, December 1934.

the abandonment of farms because the soil is poor or worn out, or for one reason or another no longer profitable. Greater capital investment with less land area devoted to agriculture was found to be necessary in 1930 than in 1910. Farm areas within the 100 persons per square mile density contour are generally dormant due to speculative withdrawal for urban development."

The State Planning Board in Pennsylvania has analyzed the relation between markets and agriculture, and prepared a map which shows the population and pay roll per square mile of farm land. In the upper half of the anthracite area there was paid in salaries and wages in industry \$416,000 for every square mile of land in farms. In the southeastern area, the industrial salaries and wages amounted to \$412,000 for every square mile of farm land. These two areas had from 1,500 to 2,000 nonfarm available purchasers of the farm products of each square mile of farm land. In contrast, the 6 counties in northeastern Pennsylvania had only 54 nonfarm people, and only \$3,000 of salaries and wages in industry per square mile of farm land. This area has no city of more than 20,000 population, while the other two areas, with about half as much farm land, have 9 such cities, one of almost 2,000,000. The northeastern area has very limited local outlets for products, but its relative nearness to the metropolitan area of New York makes possible an extensive milk development. The relative capacity of available markets accounts, in large part, for the fact that the northeastern area produces crops worth \$16 per acre while the southeastern area produces crops worth \$42 per acre. No part of the State is more than 200 miles from some market of considerable capacity, but the areas adjacent to these markets have decided advantages over those 100 to 200 miles away.

Further west, still a different variety of problems and policies appear in the State planning reports. The Wisconsin Regional Planning Committee sees the problem of settlement and resettlement as its major concern.

"In the agricultural area where farms occupy most of the land the problems of readjustment are largely private, to be made by the farmer himself. The notable exception is erosion control, which calls for public activity, aid, and regulation. In the central sandy counties it may involve concerted action to secure wind breaks to control wind erosion.

"In the nonagricultural area there are some compact agricultural settlements near markets on railroads and highways and on good soil. Insofar as there is need for further expansion of agriculture, it should take place on the land suitable for agriculture in already established communities so as to reduce the demands for

new schools and roads to a minimum. Insofar as submarginal land is now in use, or settlements have become scattered, the land should be vacated in favor of other land uses. The first calls for planning in settlement, the second for the planning of resettlement."

The attempt to develop better policies of farm management in Minnesota is complicated by the high proportion of tenant farmers. The State Planning Board finds that farm acreage has reached its approximate maximum point, and that since there is no necessity to use all the land for agriculture, only the best land should be chosen. There should be a steady shift from poor land to better land as arrangements can be completed. Haphazard settlement of the unemployed upon the land is not desirable.

"In Illinois it is generally recognized that certain agricultural sections of the State under the present system of use are in need of adjustment to enable the people living in these areas to derive the greatest return from their natural resources and their highest economic and social advantages."

In Iowa the farm sizes, systems of management, and incomes produced were analyzed and correlated with soil types, to determine the best procedure in each part of the State.

The studies so far completed in Kansas indicate the advisability of devoting a larger proportion of land to forage and feed crops and in smaller proportion to cash crops.

In Kentucky, the State Planning Board cooperated with the State Agricultural Experiment Station and the Bureau of Agricultural Economics to make possible the completion of studies already undertaken, especially in the preparation of reports. This work made possible the classification of lands, and especially the determination of marginal areas.

Perhaps the best indication of the activities and approach to planning in this field by the Tennessee State Planning Board is indicated by a partial list of the maps in its report on "Rural Land Use in Tennessee."

Value of Farm Land and Buildings per Rural Farm Person.

Value of Farmer's Dwellings per Farm, 1930.

Value of Farm Land and Buildings, per Acre, 1929.

Assessed Valuation of Acreage per Acre, 1932.

Acre of Total Farm Land per Rural Farm Person, 1930.

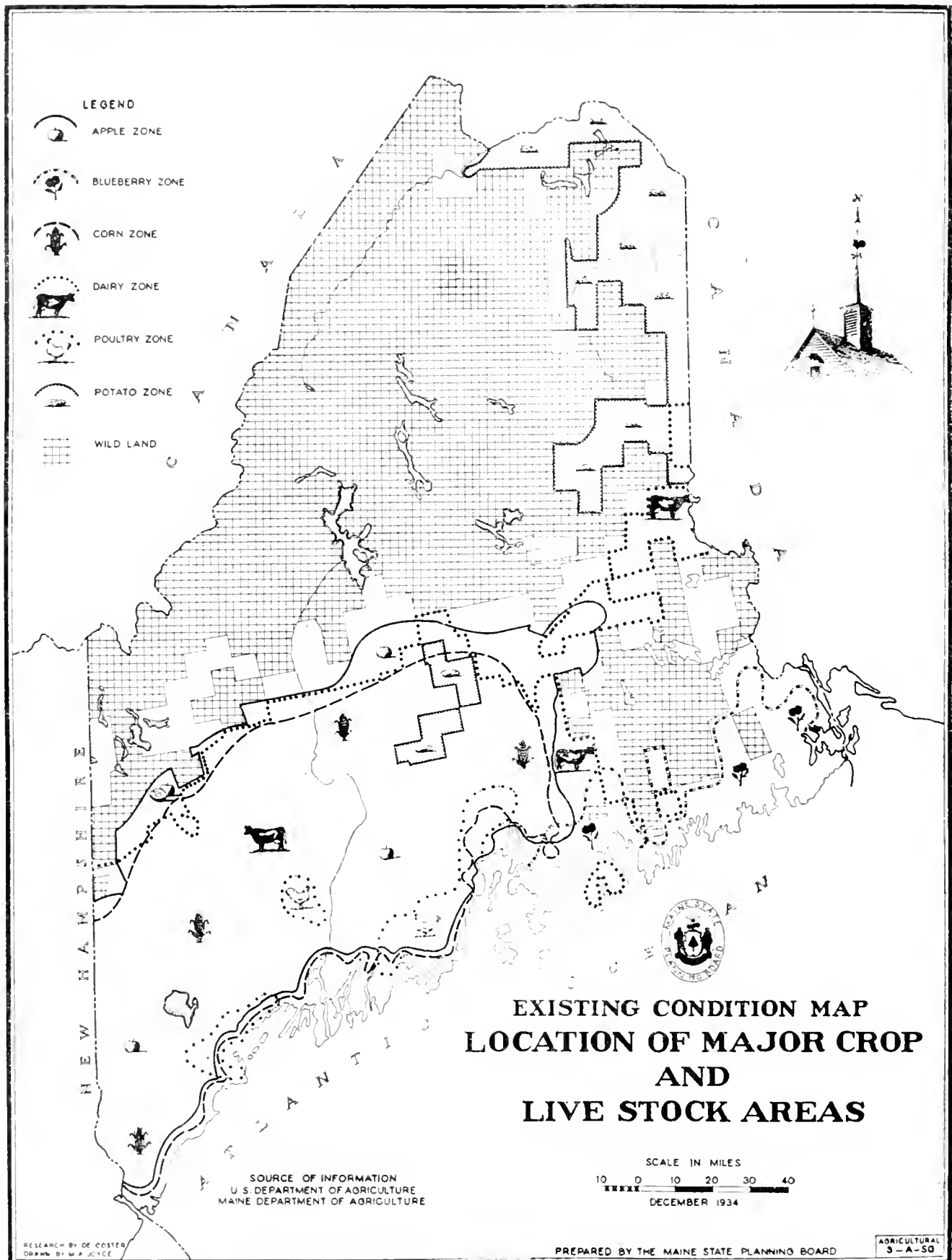
Percent of Farm Land Operated by Full Owners.

Percent of Farms Operated by Full Owners.

Value of Products per Farm.

Percent of Farms on Unimproved Dirt Roads.

Value of Farm Products per Farm Person.



Farm Dwellings Lighted by Electricity.
 Change in Acreage in Farms.
 Change in Acreage of Idle Land.
 Change in Acreage of Crops Harvested.
 Change in Cotton Acreage.
 Self-Sufficing Farms, Percent of Total.
 Farms, Products of Which Were Less Than
 \$400 in Value, 1929.
 Farm Dwellings Equipped with Telephones.
 Value of Products per Acre of Farm Land.
 Value of Farm Products per Acre of Total Area.
 Percent of Farms Reporting Automobiles.
 Percent of Farm Land Operated by Croppers.

The Texas State Planning Board admits the difficulties facing agriculture generally but assumes a cheerful attitude, saying:

"There are admittedly basic problems in connection with the uses of agricultural lands in Texas as elsewhere. We do not feel that these problems are insurmountable, nor that the outlook for agriculture is at all discouraging. We have endeavored to point out helpful methods of solution, particularly such as will be of advantage to the * * * farmer (without other gainful employment) or to the industrial worker who has a farm background and desires to return to the land. Finally we believe that the situation demands a return to that older and better viewpoint which regards the farm as a home for a true American family and farming as a way to a healthful and adequate living."

Similarly in the Pacific Northwest, the Washington and Oregon State Planning Boards recognize special problems but have plans and proposals for meeting them.

The land planning program of the State planning council in Washington contemplates moving to fertile areas the families now trying to cultivate submarginal land and making provision for a substantial increase migration to rural areas, expected as a result of the large irrigation and power dams now under construction as public works projects.

Due to lack of planning in the original settlement of Oregon, the State is now faced with rather serious problems in land utilization. These problems are evidenced by numerous idle farms and vacant farm dwellings, inequitable assessment and taxation and mounting tax delinquency in rural areas, increasing public ownership of rural lands through tax delinquency, unduly high per capita cost for local government services such as schools in areas of scattered population, loss of taxes when timber lands are cut over and abandoned, a rapidly increasing area of cut-over and burned-over forest land not used for any

purpose, economic dependence of part-time farmers caused by the disappearance of their previous supplementary employment, a heavy rural relief load, numerous instances where settlers have wasted both labor and savings by attempting to develop farms on marginal lands, and unsound promotional and subdivision schemes.

Soil surveys have been completed in 26 counties of Ohio, and the work is still in progress. An aerial survey of the Muskingum Valley is now under way, and attempts are being made to extend this to cover the entire State. This would provide an invaluable base map for numerous studies.

The chapter on "Rural Land Use in Ohio" in the "Preliminary Report on State Planning Studies, August 15, 1934", contains some interesting maps, three of which are particularly interesting when studied together. They are:

Exhibit II—5, Land in Harvested Crops, 1929.

Exhibit II—6, Percentage of Land in Pasture 1929.

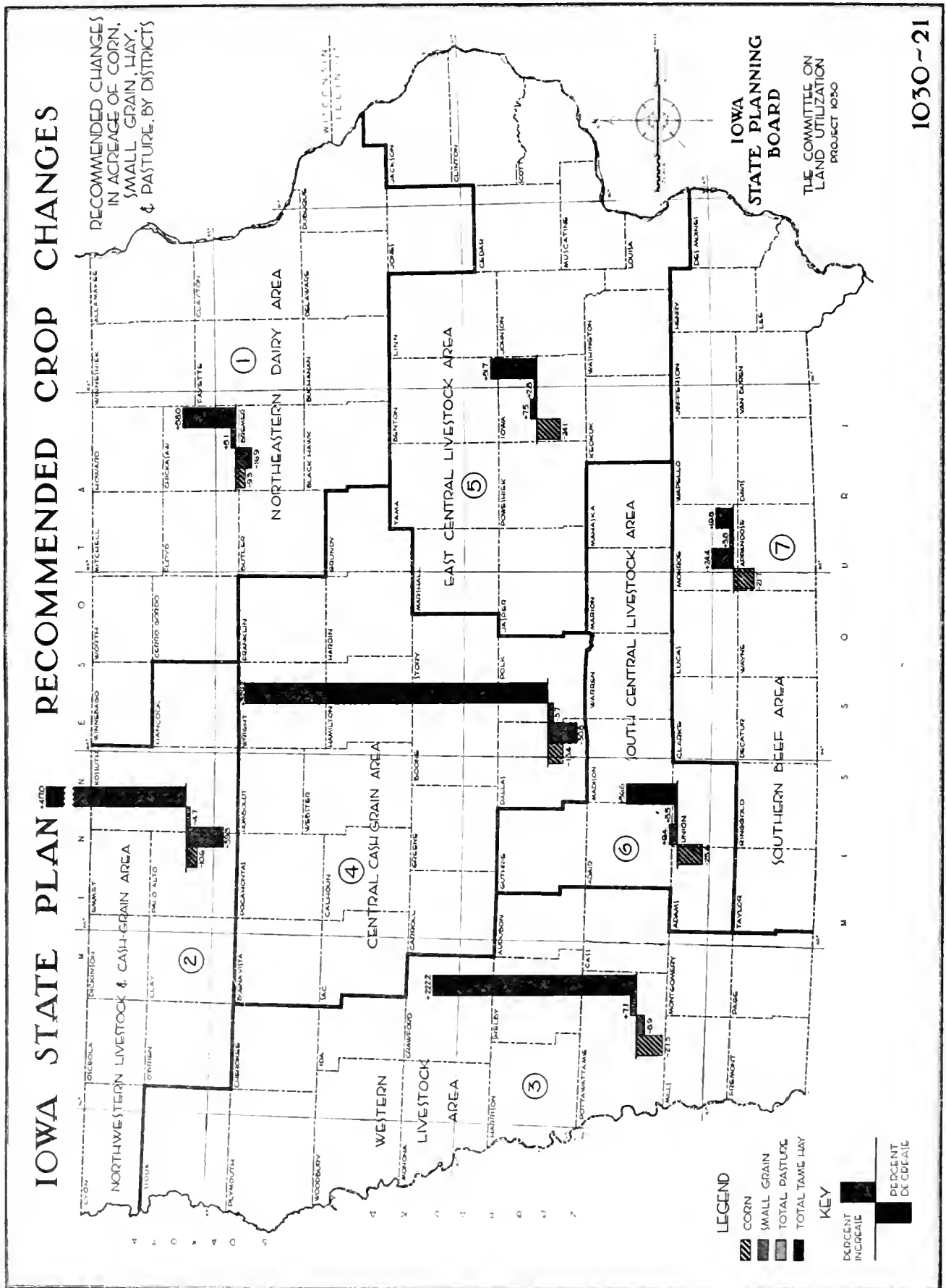
Exhibit II—7, Land Not Used for Either Crop or Pasture, 1929.

The third map shows the southeastern portion of the State as the main "problem area", where problems, however, are difficult of solution because the degree of suffering is not intense, and is not due to any one outstanding cause. The concentration around the larger cities of land not used for crops constitutes a problem that has not yet received the attention it deserves.

Crops

The total land requirements in the United States for the production of the necessary volume of all crops was given in the Report of the National Resources Board for December 1, 1934, pages 114-134. The State Planning Boards have endeavored to translate these total requirements into maps showing actual areas in crops and proposed crop areas as necessary steps in making a plan for the wise utilization of land.

The land planning problem was energetically attacked in Iowa, for instance, where the first objective of the planning board was to collect, organize, and analyze all available information relative to existing cropping systems and practices in the State, in order to get a picture of present uses and abuses of the land resources. The second objective was to utilize this information, in the formulation of desirable recommendations for an improved use of the land, toward which a number of interesting maps was prepared. One map shows the average 5-year production per acre of corn, oats, barley, wheat, mixed hay, clover,



alfalfa, permanent pasture, and rotation pasture, by county, for each crop. One very interesting map is that showing "Feed Unit Production Per Acre, by Townships (fig. 1030-6, Progress Report, September 1934, p. 20) which shows the average number of feed units (feed conversion factors are based upon digestible nutrients) produced by each acre of crop land in the townships.

The following table is given:

Product	Feed units	Product	Feed units
1 bushel of corn.....	1.00	1 ton of legume beans.....	18.00
1 bushel of wheat.....	1.07	1 ton of mixed hay.....	15.00
1 bushel of rye.....	.75	1 ton of timothy hay.....	38.70
1 bushel of soy beans.....	1.26		

"Recommended Crop Changes" are shown on a map by means of bar charts for each of the seven districts into which the State is divided. The map is described as follows:

"It is recommended that Iowa corn acreages be reduced from their 1929 acreages, ranging from a 9.3 percent reduction in district 1 to 27.3 percent in district 3. Small grain acreages in districts 1 to 4 should be reduced from 8.9 percent in district 3 to 30.8 percent in district 4. On the other hand it is recommended that there be an increase of small grains in districts 5, 6, and 7" (Progress Report, September 1934, p. 42).

"Use of Crop Land" in each of the seven districts is shown on a map of the State by means of a circular chart for each district with segments showing the percentage of the total crop land used for corn, oats, barley, and wheat.

Marked changes in crops grown have taken place in Minnesota in the last 40 years, and particularly in the last 20 years. Wheat, which was the primary crop for a long period, has in the past decade or two become of secondary importance. In the southern part of the State corn has largely replaced wheat as a field crop. Throughout the State livestock industries, particularly the swine, dairy, and poultry industries, have increased to major importance (Report of the State Planning Board, pt. I, November 1934, p. 14).

The State Planning report in Illinois recommends continued research to the end that the industrial and nonfood uses of agricultural products may be extended, and also that new crops adapted to Illinois conditions may be discovered (Report, State Planning Commission, December 1934, p. 9).

The same suggestion is made also by the State Planning Board in Indiana, which adds: "Since there is already an apparent surplus of farm commodities in Indiana, as well as in other States, it is believed that the land acreage now under cultivation in the State

should be curtailed"; and again, "In planning for the future amelioration of agriculture in Indiana, the elimination from competitive production of much sub-marginal land should receive prime consideration. The allocation of competitive crop production to the more fertile northern area where it economically belongs, should result in greater agricultural efficiency in the State; and constantly increased efficiency is necessary to continued progress" (Preliminary Report, 1934, pp. 102 and 117.) The detail with which this planning board has studied the agricultural problems of the State is shown by the following list of maps in the Preliminary Report of 1934:

Corn Production, Wheat Acreage, Oats Production, Hay Production, Clover Seed Production, Apple Trees, Peach Production, Grape Production, Tomato Production, Onion Production, Potato Production, Mint and Tobacco Acreage, Vegetable Production.

Florida, owing to its climatic advantages, is ideally suited for the production of many types of crops. Investigations already have been started to explore the possibilities of this field. Its location with respect to national and international markets also is favorable. Its main export crops are cotton, tobacco and hog products; fruits and vegetables are sold in the national markets. The market for staple farm products and poultry is purely local, and will increase only with population increases in the cities of the State. The production of winter vegetables is now more than sufficient to supply the demand, but as purchasing power increases this demand may expand. Citrus groves already planted probably will bear before the market can absorb additional production, so that further planting should be delayed. The Everglades section can be drained cheaply, and the land is very fertile, but care should be exercised to see that this section is not developed so rapidly as to displace the present producing centers.

The Texas State Planning Board recommends that "Cotton should be raised only on those lands where it can be produced cheapest", and that diversification of crops be attempted: "There should be increased production of vegetables and fruits both for local consumption and for shipment. There has never been an adequate supply of either in the country, particularly in the winter" (pt. V, p. 6).

Animal Husbandry

New Hampshire was once famous for its sheep, its production of mutton and wool, but advances in refrigeration permitted the sheep raisers south of the equator to capture this trade. The consultant to the State Planning and Development Commission in his report on "State Planning in New Hampshire",

1935, page 36, points out that a more lucrative trade has taken its place. Dairy products are now the leading agricultural resources of the State; New Hampshire milk, cream, and butter supplies most of the market in the Boston metropolitan area. The value of poultry and eggs produced in the State almost equals the value of all field crops.

In its report on "Land use problems", the Florida State Planning Board says, "With the cattle fever tick being eliminated from most parts of the State, and large areas of former truck land displaced by the Everglades truck section, it is indicated that farmers in central, north, and the southern part of west Florida should resort more and more to the raising of livestock as their main source of income."

In the preliminary report of the Indiana State Planning Board, animal husbandry is shown on a series of five pictorial maps, indicating production of dairy products, eggs, cattle, swine, and sheep. Dairying is most prominent in the northeastern portion of the State, egg production in the north-central and southern portion, cattle are rather evenly distributed over the entire State, and sheep are most numerous in the northeastern portion of the State.

In Maine, the attempt is made to show all this material in one pictorial map, which shows, among other things, that the corn and dairy zones are rather closely associated, and that the poultry zones are small.

Plate XI in the report of the State Planning Board of Minnesota shows the increase in dairy cows, swine, and egg production since 1890 by a series of bar charts in each county on a map of the State. "The increase in swine corresponds closely to that in corn. In each of the three cases the increase is striking. Figures are shown for dairy cows for the years 1929 and 1933, from which it is seen that a period of stability has apparently been reached. This is even more strikingly true in the case of swine" (p. 14). Animal husbandry has replaced grain farming, with an improvement in soil conditions and increased returns to the farmer.

Animal husbandry as an alternative to crop agriculture for poor lands is discussed in the following extract from the "Preliminary State Planning Studies of the Ohio State Planning Board": "The predominance of pasture land in southeastern Ohio is due largely to topography and in part to some limestone outcroppings which occur in the eastern half of this area. The acreage of land in pasture is no indication of its carrying capacity. Southeastern Ohio with a high percentage of land in pasture is definitely limited in the amount of livestock that can be grazed because of the low quality of much of the pasture. Another limiting factor on the quantity of livestock that can be raised in this area is the small amount of grains and hay for winter feeding" (ch. II, p. 12).

Grazing

Grazing problems are summarized in the following extract from the December 1934 progress report of the Idaho State Planning Board: "The need for regulation of public domain lands in the West is now generally recognized. Federal legislation (the Taylor Act) designed to stop injury to public grazing land, and to aid in the development of a stabilized livestock industry, was approved in June 1934. In some parts of Idaho we have many small scattered parcels of public lands which will not be suitable for grazing associations under the Taylor Act unless an administrative-sized unit can be obtained by exchange of lands, long-term leases, and donations. In the interest of giving all stockmen and farmers an opportunity to plan for the conservation, rehabilitation, and economic use of an area of range land, it is desirable that consideration be given to the possibilities of a State cooperative grazing district law."

In California and New Mexico, overgrazing is held responsible for most of the wind erosion. This would seem to justify rather drastic measures for the control of grazing.

In Montana the State Planning Board is considering the desirability of encouraging grazing on irrigated farms, where winter feed for cattle and food for the ranchers' families will be produced. It says:

"In areas that are going back to range use, it is desirable to encourage families to relocate where winter feed, gardens, and suitable farm homes are possible, and to encourage the use of range lands for as long a grazing season as is consistent with maintaining maximum carrying capacity.

"Interspersed irrigated tracts should be constructed wherever possible in such areas to permit relocation of families in communities sufficient in size to assure desirable social advantages with fair economic security.

"Controlled grazing under the provisions of the Taylor Grazing Act is desirable and all lands that are not agricultural should be withdrawn from homestead entry.

"It is consistent to encourage the development of well distributed, small irrigated tracts, as a means of providing feed for use in combination with early spring or late fall range, but not necessarily as a base for home locations.

"Where conditions favor the development of self-supporting stock ranches through the construction of small irrigation projects, such projects should be encouraged regardless of the opportunities for the development of communities."

In Wyoming, the planning board has made a study for economic land utilization, coordinating it with the rural rehabilitation program there. Of this study the board says: "It is primarily intended to produce a

balanced condition between our livestock summer grazing and winter feed and fodder load in determined general areas, and to transfer submarginal dry-land farmers now on relief to irrigated or completed irrigated projects within the area." The members of the board and the consultant planned and secured approval of several drought relief projects extending into more than one county, principally to meet temporary livestock distress.

Farm Sizes

Farm size often accounts for the difference between successful and unsuccessful farming. In some cases the type of farming can be changed to fit the size of the present holdings. In others, it will be necessary to consolidate present holdings and move the surplus farmers to new lands, either in the immediate neighborhood or at a distance.

In California, the planning board found "numerous areas which contain a significant number of farming units which are not making the best possible use of the land because the size of the farming unit is inefficient." In Colorado, the general tendency toward larger farms is shown by the fact that while between 1920 and 1930 the total farm acreage increased 18 percent, the number of farms was practically stationary. However, in certain sections, as in the San Luis Valley, the average size of farms has decreased. With a more intensive development, and in some irrigated districts, it will be sound economy to subdivide farms into still smaller units.

The Iowa report points out that changing the farm size is often difficult, and cannot readily be effected by the State. The adjustment of the type of farming to the size of the farm is preferable where sufficient relief can be secured in this way. The following suggestions are made for accomplishing this: It is believed that the most workable approach to the problem is an educational program to encourage farmers to adjust the type of farm over a period of time by gradually building up dairy or beef cattle herds and increasing their acreages of legumes and grasses. An educational program of this nature can best be carried out through the agricultural extension service" (Planning Board Report, April 1935, pt. I, Land, pp. 44 and 45).

Research studies in Iowa indicate that the production per acre is less on small farms than on large ones, and also, that erosion is greater on small farms than on large ones (pp. 2, 3, and 4).

The Minnesota State Planning Board says that since 1890 there has been very little change in the size of farms. The number of farms there has increased in approximately the same ratio as the acreage (Report, November 1934, pt. I, p. 14).

The Montana State Planning Report makes the following recommendation:

"Adjustment in size of wheat and livestock farms in nonirrigated areas should be encouraged by bringing about a better general understanding of the need for the expansion of farm operations where present units do not provide adequate income, but such adjustments should be left to private initiative" (State Planning Board Report, Apr. 16, 1935, p. 5).

The New Hampshire State Planning Report has the following observation to make regarding farm size: "Since New Hampshire is a dairying region, the size of its farms pivots around a dairying economy and reflects the ability of the farmer to provide winter shelter for his herds" (State Planning in New Hampshire, Mar. 15, 1935, p. 42).

In Ohio the State Planning Board has analyzed the records of farm sizes as follows:

"The average size of farms in Ohio in 1930 was 98 acres. The number of acres per farm increased 9.6 percent between 1900 and 1930. Acres per farm increased in 76 counties between 1920 and 1930 and decreased in 12. In more than one-third of the counties farms have been increasing in acreage for 30 years, and in some counties they have increased in size for the past 40 years * * *. In 1930 farms of less than 50 acres in size comprised 26.7 percent of all farms in the State. Ten years earlier this same group made up 29.6 percent of the total. Between 1920 and 1930 the number of farms in Ohio with less than 50 acres per farm declined 23 percent, whereas the total number of farms in the State declined 14.6 percent."

CLASSIFICATION AND ZONING

"The time has passed when land use can be regarded as a strictly private affair."² It is a sound principle of the law that no man has the right so to use his own property that he injures his neighbors. Cities long ago recognized the necessity of regulating the individual use of property to protect the general welfare of the urban community. No farmer or rancher has a right

to abuse his land so that his neighbors are damaged by floods or drifting sands and soils. Neither should he be permitted to destroy ruthlessly the values of his own lands, for the State has an interest in those values.

Zoning is a legal instrument for directing the best use of land. The Minnesota State Planning Board does not regard³ rural zoning as a method of restricting

² "Progress Report", New Mexico State Planning Board, Apr. 15, 1935, p. 91.

³ Minnesota State Planning Board Report, October 1934, pt. II, p. 28.

desirable uses of land, but as a method of directing the use of land in accordance with its suitability. Existing uses are not to be interfered with as long as they continue, but new settlement should be restricted in areas unsuited to agriculture. Settlers may be kept from locating in areas where the costs of providing schools for their children and roads for their use will be unnecessarily exorbitant in comparison with the support of these services the settlers are able to bear. Also, scattered settlement in forest areas, adding to fire risks and costs of fire protection, may be limited by rural zoning.

Land-use planning consists of more than the making of a land-use inventory and the classification of land according to its best use. The Idaho State Planning Board recognizes⁴ that coupled with these phases of planning is the need for a program of action necessary to bring about effective adjustments in land use. The adjustment program must be made upon a local basis and must be sanctioned by the communities involved. In Idaho, this has been attempted by the organization of city, county, and district planning boards. In Wisconsin, counties have the power to make the adjustment in land uses through county zoning ordinances.

The Wisconsin Regional Planning Committee, from observations⁵ made of uses of the Wisconsin legislation enabling counties to zone rural territory, has found that the major objectives of rural zoning in the northern counties of the State have been the promotion of forestry, the removal from agricultural use of isolated and nonproductive farm lands, and the reduction in costs of local government, particularly schools.

Zoning Defined

Zoning has been defined by Edward M. Bassett as "the creation by law of districts in which regulations differing in different districts prohibit injurious or unsuitable structures and uses of structures and land."⁶

The principle of zoning is the dividing of an area into definite districts in which certain land uses are either prohibited or encouraged. The districts are created by a standard legal procedure, and all regulations imposed upon the land use within them are made for the protection of the public health, safety, morals, and general welfare. Merely classifying land according to its best use in the hope that such use may be gradually brought about without legal regulation is a useful device, but it is not zoning.

History of Zoning

Although there are instances of regulations of real property by districts, beginning, as the New Mexico State Planning Board has noted⁷ with the segregation of laundries in Modesto, Calif., in 1885, the real development of zoning as an instrument in the field of planning has occurred within the past 20 years. The first comprehensive urban zoning ordinance was adopted by New York City in 1916. The years from 1916 to 1926 were a formative and trial period for urban zoning. Court rulings, on several occasions, nullified zoning regulations, but all doubt as to the constitutionality of urban zoning was set at rest by the United States Supreme Court in 1926 in the *Euclid Village (Ohio) Case*. In its opinion at that time, the Court held that (1) zoning is justified under the police power, (2) legislative judgment must control as to the validity of classification, and (3) a zoning ordinance must not pass the bounds of reasonableness and become an arbitrary fiat. While the constitutionality of zoning may be no longer questioned, zoning ordinances may still be held unlawful if, within the opinion of the courts, the ordinances fail to be reasonable.

While the use of zoning in urban areas has progressed rapidly, at the present time county and rural zoning are still in an experimental stage, similar to that of city zoning prior to 1926. Los Angeles County, in 1925, was the first to adopt a county zoning ordinance. Milwaukee County, Wis., adopted a zoning ordinance in 1927, the first one to be formulated under the Wisconsin enabling act of 1923. In 1928, Montgomery and Prince Georges Counties, Md., adopted zoning ordinances, but the regulations apply to parts of the counties lying within the metropolitan district of Washington, D. C., and involve urban territory. In 1933 Oneida County, Wis., adopted the first strictly rural ordinance. The Wisconsin Regional Planning Committee reported in December 1934 that 19 Wisconsin counties⁸ had enacted zoning ordinances. Progress in the field of rural zoning has been most rapid in that State.

The restrictions imposed in rural zoning must be reasonable and the contributions to the general welfare must be sufficient to outweigh any curtailment of individual rights. Therefore, any restrictions on land use which would result in lowering the returns from land would be unreasonable unless the interests of the public required such restrictions. Therefore it is necessary that the desirability for zoning be clearly demonstrated before it is attempted.

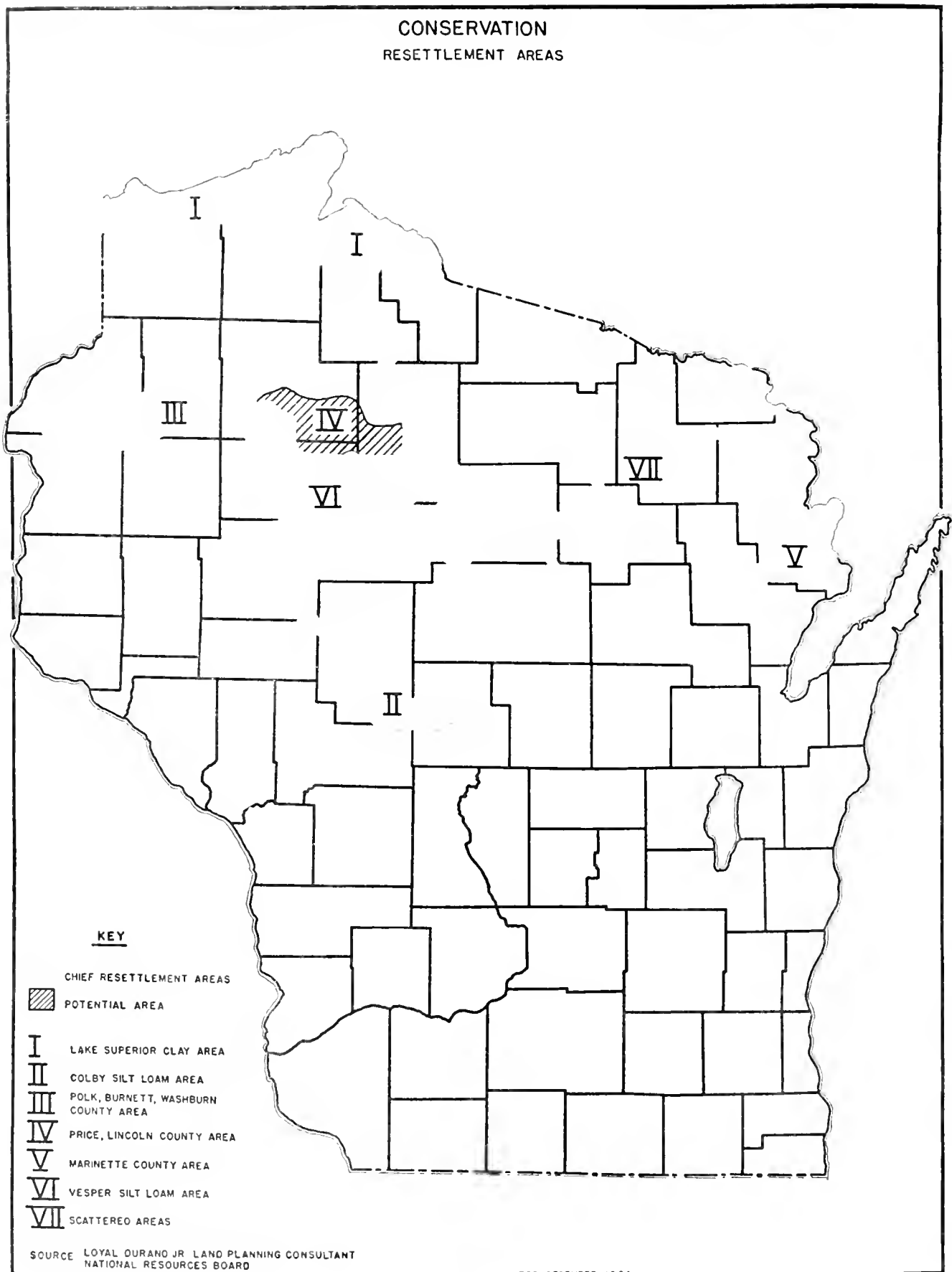
⁴ Progress Report, December 1934, Idaho State Planning Board, p. 2.

⁵ Wisconsin Regional Plan Report, Wisconsin Regional Planning Committee, 1934, p. 275.

⁶ "The Principles of Zoning", American Civic Association, Washington, 1920, p. 8.

⁷ Progress Report, Apr. 15, 1935, New Mexico State Planning Board, p. 76.

⁸ "Regional Plan Report" Wisconsin Regional Planning Committee, December 1934, p. 278.



Land Classification

The basis for all rural zoning regulations are studies of existing land uses, land classification, and analysis of possible land utilization. The North Dakota State Planning Board has stated⁸ that one of the first objectives in a comprehensive planned land use survey must be the "determination and establishment of the major land uses best suited to the conditions, the location, and extent of the various classes, with the purpose that the greatest benefits from right use may accrue to individuals and groups as a whole." Soil and economic surveys should be made to determine the present and alternative use of each acre of land in North Dakota. The New Hampshire State Planning and Development Commission also included⁹ biological and hydrographical surveys with soil surveys to determine the foundation for proper plans and to develop a logical procedure.

From surveys, the Florida State Planning Board has been able to classify¹⁰ the major uses of land as follows: Urban, farms, range, forests, recreational areas, and wildlife refuges. The state planning board has observed that the requirements of the people of the State for land for these major uses depend upon the desire for higher standards of living, for better conditions among rural population, for a better culture, and for greater happiness.

The Kentucky State Planning Board proposed¹¹ classifying all land within the State into two groups: Areas most favorable for economic activities such as agriculture, mining, and industry, and areas least favorable but suitable as preserves and reservations for forestry and wildlife. The classification would be based upon considerations involving the following:

Soils:	Natural resources:
Fertility.	Minerals.
Farm land values.	Water supply.
Present use.	Power.
Topography:	Transportation:
Elevation.	Waterways.
Relative relief.	Railroads.
Climate:	Highways.
Length of growing season.	Population trends.
Relative relief.	

Problem Areas

Studies of the land use and possible utilization have indicated problem areas in which zoning regulations

might influence better use of the land or restrict those uses generally in conflict with the public welfare.

A problem area has been defined¹² by the Ohio State Planning Board as "an area where land is deteriorating and/or not producing sufficient income to provide a reasonable standard of living under its present use."

An example of the classification of land-use problem areas is that used¹³ by the Iowa State Planning Board. Seven classes have been considered. They are:

1. Areas in which a substantial part of the farms are on land of such low productivity that arable farming is uneconomic and undesirable, and should be replaced by some other major use such as extensive grazing, forestry, and recreation.

2. Areas in which most of the farms should be permanently retired from cultivation and devoted to other major use for reasons other than the fact that they are unsuited to farming, such as areas having a potential use for public recreation or other public use.

3. Areas where on a significant portion of the farms, a change in the size, tenure, or financial status of holdings, or the provision of sources of supplementary income to farmers, is desirable.

4. Areas in which the checking of serious erosion on farms should be effected by a change in the cropping system, but without necessitating changes in the sizes of the holdings.

5. Farming areas which can be made suitable for continued occupancy by other farm improvements.

6. Areas of forest or cut-over land not in farms and not in public ownership where a constructive form of land use should be instituted.

7. Range lands where conditions of land use result in depletion of forage, in erosion and in economic instability.

The Pennsylvania State Planning Board has used the term "submarginal farm land" to refer to lands "so low in productivity and value of products sold per acre that arable farming is uneconomic and undesirable. It is land from which a satisfactory living cannot be derived over a period of normal years. There is no clear-cut division between a marginal and submarginal farm. A slight change in the price of farm products may change the classification of many farms."¹⁴

The Tennessee State Planning Board believes¹⁵ that rural zoning will play a very large part in preventing the future farm development in the poorer, thinly populated parts of the country. Zoning and

⁸ "Major Land Use Problem Areas and Land Utilization", 1935, Ohio State Planning Board, pt. I, p. 1.

⁹ "Progress Report—September 1934", Iowa State Planning Board, pp. 6, 7, 8.

¹⁰ "Preliminary Report, December 1934", Pennsylvania State Planning Board, p. 108.

¹¹ "Rural Land Uses in Tennessee", Nov. 30, 1934, Tennessee State Planning Board, p. 14.

¹² "State Planning" North Dakota State Planning Board, pp. 12-13.

¹³ "State Planning in New Hampshire", Mar. 15, 1935, p. 89.

¹⁴ "Report on Land Use Problems", Florida State Planning Board, p. 102.

¹⁵ "Preliminary Report on a Series of State Planning Studies", September 1934, Kentucky State Planning Board, appendix A, b. 3.

the wise planning of school and road policies with changes in the tax laws could furnish the means of grouping population along existing roads, near towns, and in small areas of better land.

As the Minnesota State Planning Board has pointed out,¹⁶ settlement should be discouraged on land unsuited for farming or so located that it involves unnecessarily high costs for public services. There are isolated settlers whose tax contribution represents only a small portion of the public costs of providing schools and roads.

The Washington State Planning Council has been confronted¹⁷ with a similar problem of isolated settlements upon poor lands. However, in Washington, the fact that these areas are often located in forests increases the cost of fire protection for the timberlands. Also, the lands, as the council has found, are often tax delinquent, and instead of carrying any share of their tax expense, force public services to be carried partially or completely by other taxable areas in the county.

Frequently these lands revert to the counties as tax delinquent. The New Mexico State Planning Board proposes¹⁸ that such lands when offered for public sale should be restricted to prevent new groups of settlers from attempting crop farming in the areas. While restrictions might be placed upon the land at its sale, the use of county zoning regulations would insure a continuance of the restriction.

The Florida State Planning Board is of the opinion¹⁹ that any sale of lands for farming purposes should be surrounded by safeguards to protect not only the buyer but the community upon which he is likely to become dependent. These restrictions seem more necessary in Florida than in other States because of the spotty location of good agricultural lands.

Land purchase programs of submarginal lands accompanied by adequate rural zoning increases the chances for success since zoning can control land intervening between the submarginal purchase areas which might otherwise be settled. Obviously, if additional submarginal lands should be brought into production after retirement of similar areas, land purchase programs would be of small use. The Florida State Planning Board believes that rural zoning is the only answer to this problem.

Speculation in poor land might be stopped effectively by rural zoning. The New Jersey State Planning

Board has found²⁰ that a considerable portion of inferior farm land in New Jersey is kept in use through a practice termed "sucker-baiting", repeated sales of unproductive lands to inexperienced farmers from nearby cities. The spotty character of New Jersey's soils, with poor land scattered deceptively through the good tends to facilitate such unscrupulous activities. The resulting failures and hardships make New Jersey's submarginal farms a special public liability and a private investment hazard.

There may be land that is submarginal for livestock production as well as land that is submarginal for agriculture. The New Mexico State Planning Board through its studies has found²¹ range lands where conditions of the land use have resulted in depletion of forage and erosion. Range land has suffered repeatedly from overgrazing, especially upon the public domain. The struggle to use the public domain has been continual, and according to the board, practically every trick conceivable has been used to control these lands. The Taylor Act will bring some improvement in these conditions, but a permanent land use program to control grazing upon both public and private lands the New Mexico Board suggests, can only be made effective through the use of rural zoning.

Abandoned Land

The Pennsylvania State Planning Board has stated²² that farm land in Pennsylvania has been decreasing at the rate of 135,000 acres annually for the past 30 years. The board believes this conclusive evidence that sound social and economic factors have been responsible for the abandonment, and that the movement is not merely temporary. Further, the board is of the opinion that if it were not for a reluctance to move away from property accumulated through years of hard work and the necessity of starting life anew in a different environment, the abandoning of the lands would proceed at a greater rate.

The New York State Planning Board has observed that²³ "for 25 years the problem of the 'abandoned farm' has been studied and it remains a problem. But one thing is sure; there would be fewer abandoned farms if the owners had known more about the soil and what could be expected of it. Many acres would never have been cultivated." Future cultivation of the land might be prevented by rural zoning regulations.

¹⁶ "Minnesota State Planning Board Report", October 1934, pt. II, p. 29.

¹⁷ "Major Land Use Problems and Policies for Washington," Nov. 23, 1934, Washington State Planning Council, p. 6.

¹⁸ "Progress Report, Apr. 15, 1935", New Mexico State Planning Board, p. 90.

¹⁹ "Report on Land Use Problems", Florida State Planning Board, p. 48.

²⁰ "Preliminary Report, September 1934", New Jersey State Planning Board, p. 46.

²¹ "Preliminary Report of New Mexico State Planning Board, Dec. 15, 1934", p. 31.

²² "Preliminary Report, Pennsylvania State Planning Board, December 1934", p. 112.

²³ "Summary Report to Gov. II. H. Leberman, January 1935", New York State Planning Board, p. 27.

Legislation

Partly through the efforts of the Tennessee State Planning Board, a rural zoning enabling act has recently been passed by the Tennessee Legislature. The act applies only to those counties having a population of 300,000 or more, and empowers the quarterly county court to regulate the uses of land and buildings within any unincorporated portion of the county.

County zoning is essentially a local undertaking. The actual formulation of zoning regulations is the responsibility of local authorities. The Kansas State Planning Board recommends²⁴ that any actual plans for land use adjustment must have as its starting point the actual farm. Local authorities are best fitted to consider problems concerning local individuals.

The Missouri State Planning Consultant has recommended²⁵ the inclusion of a section in State enabling acts for rural zoning to permit the control of the erection of billboards and signs. The board is not alone in making this suggestion. In several States, laws already have been enacted separately to regulate the location of billboards and signs along highways.

The New Hampshire State Planning Consultant has recommended²⁶ a method of procedure for New Hampshire towns for developing rural zoning regulations. The commission recommends that each town first determine the allocation of its own lands best suited for farming purposes from a sound survey and analysis of basic agricultural data. The measures for conserving the agricultural resources can then be instituted in conjunction with neighboring towns and the State in order to preserve and promote the develop-

ment of lands in the determined agricultural districts.

The Illinois State Planning Consultant recommended²⁷ a program of zoning legislation which would "develop progressive official zoning control by municipalities and counties designating actual areas to be occupied for agricultural, forest, recreational, industrial, residential, and commercial uses" the districts to be determined by established standards of zoning control.

Conclusions

The New Mexico State Planning Board, after a careful study of county and rural zoning, has been able to form the following conclusions:²⁸

1. County zoning must be based on a State act enabling the counties to district their land according to its best uses and the county's needs.
2. County zoning must be administered by local boards.
3. County zoning can regulate the undesirable use of land in such places where another use is necessary for the general welfare. Under its provision, counties can regulate the plowing of land which might cause wind erosion and the over grazing of land causing water erosion.
4. County zoning can be used to curb expenditures for public services to isolated settlers.
5. County zoning is not retroactive, but regulations can be changed to meet changing needs.

To the above conclusions might be added another. County zoning will aid in providing protection from forest fires and in encouraging reforestation programs.

²⁴ "Progress Report, Sept. 12, 1934", Kansas State Planning Board, p. 72.

²⁵ "Preliminary Report, 1934", Missouri State Planning Board, p. 62.

²⁶ "State Planning in New Hampshire", Mar. 15, 1934, p. 90.

²⁷ "Report of Illinois State Planning Commission", December 1934, p. 15.

²⁸ "Progress Report, Apr. 15, 1935", New Mexico State Planning Board, p. 98.

RECLAMATION

Problems of land use due to lack of water, too much water, and to soil erosion or infertility have been studied by many State Planning Boards. For convenience of discussion the activities and comments of the Boards and their consultants are grouped under the above three headings.

Irrigation

All of the Western States face special problems due to lack of water as noted in the previous chapter on Climate. Records of precipitation and run-off are vitally important to their agriculture. It is natural, therefore, to find emphasis in the reports from States west of the 100th meridian on irrigation projects. Many of these State Planning Boards would go further than the National Resources Board's recommendations on reclamation policies.

The reclamation policies recommended by the National Resources Board were as follows:²⁹

1. That in view of the scarcity of water in the arid sections of the country there be developed a well-rounded plan for the use of water, based on technological and economic considerations, and that there be State participation in planning and developing reclamation projects.
2. That the general national policy should be to complete and perfect old developments and to utilize them fully so far as practicable before undertaking new ones.
3. That consideration be given to facilitating the development of numerous small and seemingly unimportant irrigation operations, which, though essentially

²⁹ Report of the National Resources Board, pt. I, p. 3.

local in significance, in the aggregate are of considerable economic importance.

4. That no Federal project involving reclamation of land for agricultural purposes be undertaken until its economic feasibility and advantages have been considered by the Departments of the Interior and Agriculture in conjunction with the coordinated planning agency already suggested.

A review of State planning comments on this problem shows a few highly individual situations and many common difficulties.

An unusual type of irrigation project has been recommended by the State Planning Board of Arkansas for 123,000 acres in the White River Basin, where rice is produced.³⁰ At present these lands are irrigated by pumping from wells, but this supply has already been depleted 20 percent, causing a corresponding increase in pumping rates that are now approaching prohibitive limits. It has been estimated that a reservoir at Greer's Ferry and a canal known as the Grand Prairie gravity system, at a combined cost of \$8,200,000, can effect an annual saving in irrigation costs of \$7.30 per acre. These savings, according to the State Planning Board, would pay for the project in 9 or 10 years.

This same board also stated: "In view of the uncertainty of rainfall at the time necessary to produce crops other than rice to the best advantage the question may legitimately be raised as to whether irrigation of lands for other crops cannot well be undertaken, and it is recommended that the investigation of the use of water for such irrigation be undertaken."³¹

Farther east in Iowa there has usually been sufficient rainfall during the growing season so that irrigation was never considered necessary. The recent drought has brought the question to public attention as one means of stabilizing agriculture.³² In Kansas³³ the function of irrigation is held to be crop insurance, rather than reclamation. The sources of water for irrigation are limited to the small amounts that may be diverted from the larger streams and underground water in the stream valleys. There are ample resources for a considerable extension of irrigation farming if it were economically practical.

"Irrigation has been carried on in the western part of the State for nearly 45 years. * * * In these regions the land was already under cultivation and values relatively high before irrigation was started. However, recurring periods of low rainfall were so certain and so frequent as to justify the expense of providing a supplementary water supply."

³⁰ State Planning for Arkansas, second report, March 1935, pp. 132-133.

³¹ See Six Months' Progress Report, Dec. 5, 1934, exhibit K, pp. 2, 3, for detailed program.

³² A Report of Progress of the Iowa State Planning Board, September 1934, p. 221.

³³ Progress Report, Kansas State Planning Board, September 1934, p. 83.

The underground water supply was sufficient to supply the needs.

"Similar measures in the interest of crop insurance may prove of value in the eastern and central parts of the State where water could be secured by pumping at relatively low cost. * * * The chief point to be considered, then, is the relative loss likely to be incurred by periodic crop failure, balanced against the expense of installing and maintaining an irrigation plant."

Where irrigation is a more familiar problem, as in Colorado, the situation presents difficulties of complexity. So far the State Planning Commission has accomplished a worth-while purpose in demonstrating the need for more thorough study. It has suggested that there might be developed systems of agriculture more economical in the use of water. There is great need of more water on some of the projects already developed, which can be supplied by building new reservoirs to store flood water that is now lost. An instance of this kind is described in the following quotation:³⁴

"In the rich and intensively developed valley of the South Platte River there is a considerable acreage of land adjacent to markets and with excellent transportation facilities, which it was intended to irrigate by means of systems now constructed and which would immediately develop into high class farm land if more water could be obtained."

The Colorado State Planning Commission has also considered new irrigation projects, without making definite recommendations, as is shown in the following quotation:

"There is still a large area of good land on the western slope susceptible of irrigation at a reasonable cost. It is estimated that irrigation development there will gradually increase until the irrigated acreage is about three times that of the present irrigated area of 1,000,000 acres. However, while the bulk of such development will be relatively cheap, it is thought that future development will be slow, due to lack of adequate transportation facilities on the western slope and relatively great distances from centers of population. The same condition holds for the whole of the upper Colorado River Basin."³⁵

In the commission's second report a different method of utilizing the surplus waters of the western slopes was considered:³⁶

"Investigations show that there is an abundance of water available to irrigate all the land under cultivation in the Colorado River Basin, while there is a periodic shortage in certain irrigated areas, the problem

³⁴ Preliminary Report to the National Resources Board on State Planning, August 1934, p. 84.

³⁵ Ibid, p. 91.

³⁶ Progress Report, Apr. 20, 1935, p. 1.

of supplying water to cover this shortage is easily met by the construction of local reservoirs and by the improvement of irrigation and drainage systems, the cost of which, with a few exceptions, can be borne by the land owners benefited. This situation is in contrast with the conditions in the river basins on the eastern slope of the Rocky Mountains, where there is an annual water shortage of from 1½ to 2 million acre-feet. The needed water can be supplied only from the Colorado River Basin by means of long trans-mountain tunnels."

In view of the danger of loss to water rights which Colorado faces through construction in other States by the Federal Government of reservoirs on streams which originate in Colorado, the State Planning Commission suggests that the Federal Government construct certain reservoirs and diversion projects in Colorado (which the State cannot finance by itself), to provide water for lands which do not at the present time receive a sufficient supply.³⁷

In Utah the support of the population depends upon the wise utilization of the limited supply of fresh water. Irrigation is therefore a matter of unusual importance to the people of the State, where the average annual precipitation over most of the area is less than 15 inches per year.

"Much of the land in the Utah Lake and Great Salt Lake Basins is seriously underirrigated," says the Utah State Planning Board. Sixty-one pages and a number of maps and drawings in a report³⁸ of 347 pages are devoted to the subject of irrigation. Several projects are analyzed which show that there is not enough high-grade agricultural land at the proper elevation to be irrigated from some of these proposed reservoirs or canals.

One of the most interesting projects discussed is that proposing to build dikes across an arm of Great Salt Lake and concentrating the inflow from the tributary rivers into this small portion of the lake with canals. By decreasing the surface exposure of the inflow, the evaporation losses will be decreased and this portion of the lake will become a fresh-water reservoir from which water can be pumped for irrigation and industrial processes.

The reports from New Mexico show that irrigated lands often have financial difficulties due to overcapitalization. Some of the reservoirs have lost half or more of their storage capacity, due to leakage and silting. Additional large quantities of water are lost by percolation from the canals and ditches. Part of this loss is being eliminated by lining the canals, but often the

reservoirs cannot be repaired or enlarged at an expenditure which the productive capacity of the land will support. Each project has to be studied on its merits, and the State Planning Board has started detailed studies which will be of great value.

The State planning consultant for Texas says "None of the projects of the United States Reclamation Service are in Texas, except a portion of the Rio Grande project in the El Paso Valley. The Elephant Butte Dam in New Mexico impounds the natural flow of the Rio Grande which had been used for many generations in the valley lands below El Paso in Texas. Necessarily this project had to deliver water to these lands from the impounded supply.

"Irrigation development in southwest Texas, where the long growing season permits raising of winter truck crops, will not add to surpluses of staple farm crops. The products will be vegetables, some fruits and berries, and feedstuffs badly needed on the adjacent cattle and sheep ranches. The conditions are quite different from those prevailing in most of the irrigated regions in the Western States.³⁹

"Irrigation was practiced in Texas by the early Spanish priests at Ysleta and San Antonio. About the year 1900 private corporations in the coastal area undertook the production of rice by irrigation, and in succeeding years the industry was expanded to include larger areas. Under the provisions of the Constitutional amendments of 1904 and 1917 and the passage of the law of 1913 enabling districts to be formed for the purpose of issuing bonds, irrigation began to develop rapidly. * * * The number of acres irrigated in 1930, according to the Federal census, amounted to 798,917."

The Pacific Northwest Regional Planning Board has the following to say of the advantages of irrigation:⁴⁰

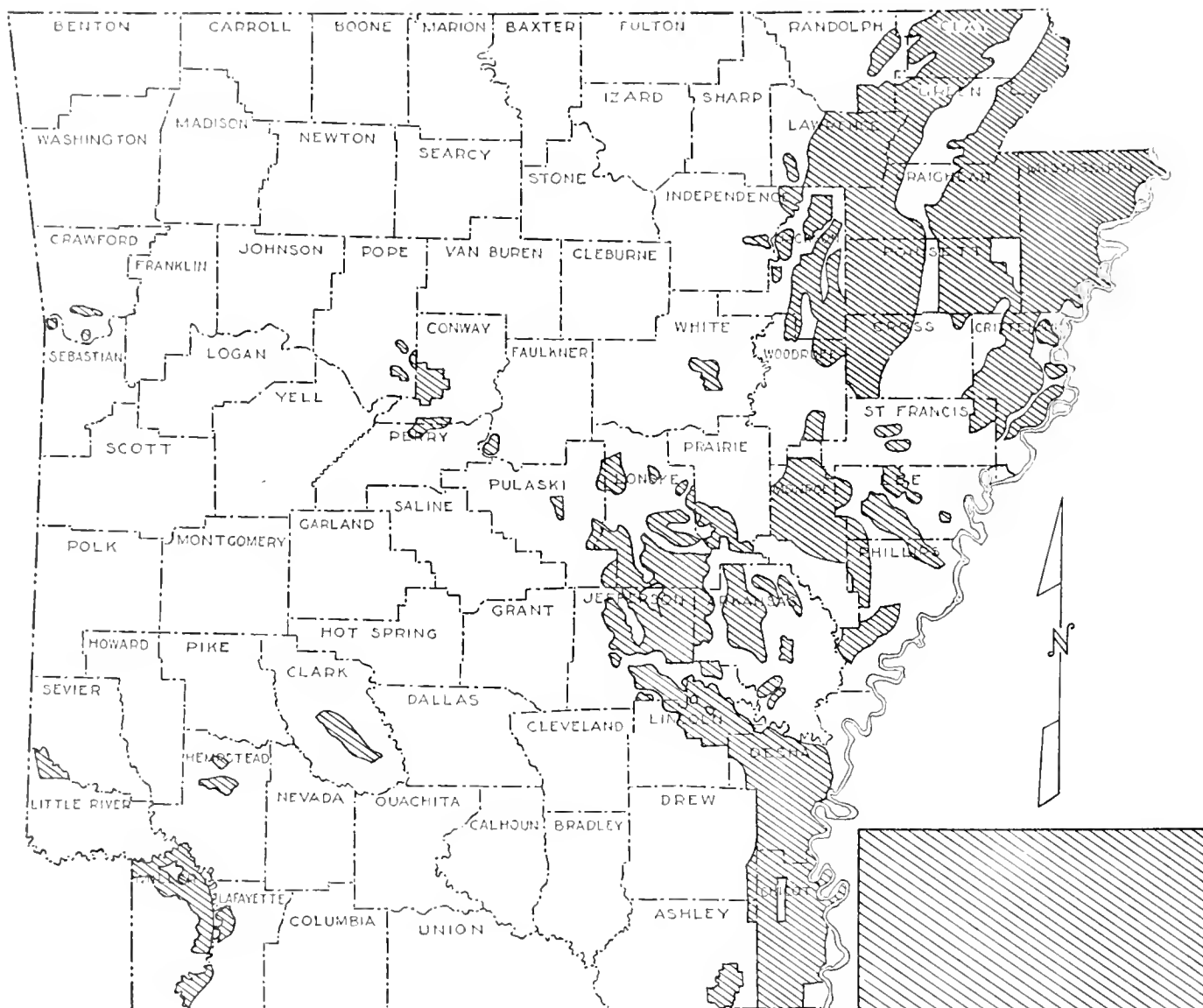
"Further development of irrigation will be economically sound and desirable, and inevitable, because of the characteristics of the country and climate, and because of the retirement from crop production of lands which are submarginal for reasons relating to soil, location, water supply, or other conditions. It will be necessary to provide irrigated lands for the resettlement of farmers from the retired areas. It will be necessary to enlarge irrigation to provide for a more balanced and self-sufficient economy in grazing areas through the production of winter feed, and of subsistence crops. It will be necessary to expand irrigation development in areas related to those in which industrial, commercial, and metropolitan expansion will occur. It will be

³⁷ A State Plan, Progress Report, Apr. 15, 1935, p. 139.

³⁸ A State Plan for Utah, Progress Report, Apr. 15, 1935.

³⁹ General Consultants' Preliminary Land-Use and Water-Resources Report to the National Resources Board, November 1931, p. 13.

⁴⁰ Problems and Progress, pp. 79, 80.



ARKANSAS
STATE PLANNING BOARD
APPROXIMATE LOCATION AND EXTENT
OF LAND IN DRAINAGE ENTERPRISES

INFORMATION OBTAINED FROM
BUREAU OF THE CENSUS, REPORT FOR 1930

From "State Planning for Arkansas—Second Report", March 1935.

LAND IN DRAINAGE ENTERPRISES
4,831,155 ACRES
13.8% OF TOTAL LAND AREA

necessary to provide supplementary irrigation in western valleys to increase the productivity and capacity for closer settlement in such valleys. The more intensive settlement of these valleys is related closely, of course, to the anticipated industrial, commercial, and metropolitan expansion." Federal and State cooperation for further development is recommended.

The Montana State Planning Board believes that it is desirable to encourage stability of irrigated areas ⁴¹ by construction of projects to supply supplemental water or by reconstruction and improvement of existing works.

The irrigation problem in Idaho is very serious and has been given careful consideration by the State Planning Board.⁴²

"The lack of sufficient irrigation water on established irrigated tracts presents another land-use problem of grave importance. It is recognized that during the past 2 years the annual precipitation has been abnormally low, thereby causing a shortage of water on irrigated lands which never before lacked sufficient water. This shortage is probably a temporary situation and of less importance than another situation which exists on some projects in Idaho.

"In many irrigated areas, particularly those lying outside the main irrigated belt, water shortage is an annual occurrence. This situation is the direct result of carrying more acres of land under the project than should be included with the supply of water available. Farmers are forced to confine their production to hay and a limited amount of wheat because other crops cannot be grown under these conditions. This limited selection of crops coupled with high water costs is responsible for a very unstable type of agriculture in these areas.

"The only solutions are either to secure more supplemental water for the project at low cost or to eliminate from 25 to 50 percent of the farms and apply all the water to the remaining land. The individual irrigation districts cannot be expected to work out either alternative because capital cannot be secured for development of more water and the remaining farms could not absorb the costs of purchasing the poor farms on the tract. Thus far no irrigated lands have been included in a submarginal purchase project in Idaho. If this program of the Government is continued, consideration should be given to this class of submarginal land. At least a demonstration project should be established to determine the best way out."

This planning board proposes to make a detailed economic study of irrigated lands to try and find satisfactory answers to these difficult questions.⁴³

Drainage

The success and needs of drainage operations in various States are variously appraised by the State Planning Boards. Most of them urge caution or State control. Many cases of unjustified drainage projects are discussed with the special problems created by the investments already made in them.

The Indiana State Planning Board ⁴⁴ is of the opinion that "under the present economic situation, further drainage is justified practically only in instances of intensive farming operations." Some of the drained soil proved to be infertile, and it is recommended that some of these areas be permitted to return to their original marshy condition.

A review by the Michigan State Planning Commission, compiled from questionnaires sent to drain commissioners,⁴⁵ shows "no present plans throughout the State for local drainage projects except for cleaning existing drains; and there is a well-informed opinion that considerable past drainage work was ill-advised and now presents a problem in its relation to inland-lake levels, ground-water levels, and related matters.

"In view of the magnitude and obvious complications in the drainage situation in Michigan—legal, engineering, and practical—a further study and survey from several angles would be necessary before any conclusions would be warranted."

Similar experiences are reported from Minnesota. About 25 years ago the State began to construct thousands of miles of open and closed drains at a cost to the people of perhaps 60 million dollars. "Viewed in the light of present tendencies in land use and effects of a 15 years drought, this extensive reclamation of marsh lands, especially as it has affected the large peat areas of northern Minnesota, now seems unwise and unnecessary. Very little of the drained land has actually proven commercially profitable for agriculture and with present trends toward the actual retirement from agricultural use of marginal and submarginal lands, it is difficult to justify attempts at maintaining these drainage systems for the purposes for which they were originally built."⁴⁶

⁴¹ Ibid., pp. 1, 2.

⁴² Preliminary Report, vol. I, 1934, p. 68.

⁴³ Preliminary Report on State Planning, January 1935, p. 127.

⁴⁴ Report of Minnesota State Planning Board to National Resources Board, March 1934, pt. II, p. 54.

⁴⁵ Report of State Planning Consultant, National Resources Board, to Governor Cooney, chairman of Montana State Planning Board, 1935, p. 9.

⁴⁶ Land Use Planning Report, Dec. 15, 1934, pp. 8, 9.

"In other cases the maintenance of present ditches in order to reclaim areas for the promotion of upland bird resources, forestation and recreation may be found to be the best plan of procedure. The problem of the conversion of drained marsh land for future use is of sufficient magnitude and effects a sufficiently large area in this State to place it among the most important conservation problems."⁴⁷

Drainage districts occupy about 7 percent of the total area of the State of Missouri, and much of this land is of such poor quality that it is unable to pay the assessments levied by the drainage districts.⁴⁸ Further studies are recommended to determine whether some land now in drainage enterprises should not be restored to its original condition.

The Wisconsin regional planning committee points out that all drainage projects should receive very careful study to determine their relation to all phases of the State plan:⁴⁹

"It is recommended that any future drainage-district work be carefully considered in relationship to the entire problem of land use for forestry, erosion control, water conservation, and game."

Special problems have developed in Virginia and Illinois. In the Virginia State planning report the principal reference to drainage is made in connection with the control of malarial mosquitoes.⁵⁰ Plans have been made to drain all known mosquito-breeding places, and a survey has been started to discover any remaining areas.

The drainage investment per acre in Iowa averages \$12.62, the range being from \$4 to \$49 per acre.⁵¹

Reports received from the Illinois State Planning Consultant describe extensive drainage projects which have been carried out over a long period of years.⁵²

"Reclamation of the Illinois River bottom lands was started shortly after the Civil War, though the greatest activity occurred between 1902 and 1922. Many comprehensive studies have been made of the Illinois River and from them has emerged a general agreement that levee set-backs aggregating \$8,000,000 in cost sooner or later will become a public project. Construction of these set-backs, it is estimated, will reduce annual flood losses from something more than \$2,200,000 to around \$560,000."⁵³

This statement makes the point that even before a State plan had been thought of, there had come a gradual realization that a comprehensive plan was needed for the entire river.

A system of reclamation which Illinois seems to have developed to a greater extent than any other State is the pumping of interior drainage from levee districts.

The report goes on to say:⁵⁴ "Public interest in drainage districts still exists and only lack of funds retards expansion, despite the well-founded belief that many of the districts were largely promotional and economically unsound. During periods of flood it is felt that lack of planning is responsible for flood-plain encroachment; during droughts, it is felt that intensive drainage has lowered the ground water level below the reach of the growing crop. The effect of the drought of 1934, though general through the State, was definitely less severe in the intensively drained central area."

Control of future drainage operations is recommended by the Arkansas and Florida State Planning Boards.

In view of the need to reconstruct many of the present drainage systems in the State the Arkansas State Planning Board made the following suggestions:⁵⁵

"(a) Creation of a State office (State engineer). The State engineer would decide upon the adequacy of plans to be considered to insure their coordination with those of neighboring districts. The present drainage law covers flood protection in addition to the drainage of local waters. Such an officer, with sufficient authority, would be in a position to coordinate a working drainage plan with local or Federal flood-control works.

"(b) The present drainage laws of the State of Arkansas should be amended so as to provide for mandatory maintenance."

In this connection the Florida State Planning Board points out:⁵⁶ "The State through control of drainage facilities can insure the orderly development and handling of this area (the Everglades), and in order to conserve it, it is recommended that further drainage should not be carried on until it seems likely that there is definite and steady demand for further produce from the area. Unused land should be kept under water until ready for use, to avoid subsidence, fires, and oxidation. Mass exploitation by promoters or developers would mean the economic ruin of those already in the area and dissipate a great natural resource."

Erosion Control

The loss of topsoil through soil erosion and the relation of loss of soil fertility to submarginal farm lands has led most of the State Planning Boards to studies of soil conservation.

The findings and recommendations are similar for many States. The seriousness of the situation to

⁴⁷ Ibid.

⁴⁸ Missouri Land Resources and Problems, Jan. 3, 1935, p. 68.

⁴⁹ A Study of Wisconsin, December 1934, p. 261.

⁵⁰ Progress Report, Virginia State Planning Board, Mar. 31, 1935, vol. II, pp. 40-45.

⁵¹ Report of Progress, September 1934, p. 50.

⁵² "Studies of Watershed Areas", Illinois State Planning Commission, March 1935, p. 8.

⁵³ Report of the Illinois State Planning Commission, December 1934, p. 66.

⁵⁴ Ibid., p. 67.

⁵⁵ State Planning for Arkansas, Second Report, March 1935, p. 131.

⁵⁶ Report on Land-Use Problems and Conditions, Jan. 1935, p. 53.

Arkansas for instance is illustrated by the following statement by the State Planning Board there:⁵⁷

1. The fertility losses by erosion on moderate slopes in soils subject to washing may annually amount to 21 times as much as the fertility requirement of a crop.

2. Soil losses on moderate slopes are frequently from 25 to 40 tons of soil per acre annually.

3. It is estimated that 3,000,000 acres of bottom land have been destroyed by debris brought in from other levels.

4. About 17,500,000 acres formerly cultivated have been irreparably destroyed, or so severely washed that cultivation is impossible.

5. One foot of soil has been lost in 30 years on certain measured areas.

6. Removal of forest debris by burning may increase the surface run-off 85 times.

This problem in Arkansas is diagnosed as due to the steepness of the slopes; the kind of cultivation required by the principal crop, cotton; the fairly heavy rainfall, and the open winters, which permit leaching and washing throughout most of the year.

One of the first activities of the Iowa State Planning Board was the making of a forest and waste land survey, the first aim of which was to obtain complete information relative to existing forests, waste land, and badly eroded land in each section of the State.⁵⁸ The second aim was to use this information in selecting the areas most desirable for future forests. It was hoped that out of this would come a program of employment for those who live nearby and are in need.

Another project of this planning board was a soil survey, one purpose of which was to measure the extent of soil erosion and the rate at which it is occurring under varying soil and management conditions.

In portions of the State it was found⁵⁹ that the pressure involved in getting a living from holdings of 120 acres to 160 acres of extremely low productivity has resulted in too intensive cultivation for the types of soil and topography and has clearly promoted erosion. Perhaps 20 to 25 percent of this land needs to be retired, either to woodland or permanent pasture. Such a change, however, would make it impossible for the present number of families to subsist in this area. The farmers who are located on moderately large holdings seem to get along about as well as farmers in other parts of the State, but the men on small farms are in a very unfortunate position.

The methods of preventing or controlling erosion are described by the Iowa State Planning Board as follows:⁶⁰

"Nearly all erosion can be controlled by the use of proper cultural and tillage practices, the method to be used depending upon the soil type, the percent of slope, and the present physical condition, that being dependent upon past management.

"In general, slopes of 12 to 15 percent and over should be used for permanent pasture or woodland, the latter being preferred when the erosion is moderate to severe. When the slopes are from 5 to 12 percent, agricultural crops can be grown using a 3- to 6-year rotation including 1 to 4 years of hay, depending on the percent of slope and the amount of erosion. On this type of land strip cropping and terracing may also be found to be of value.

"When the slopes are less than 5 percent, intensive agricultural crops can generally be grown provided a 3- to 4-year rotation including a hay or pasture crop is followed. When the erosion is found to be moderate to severe on the more level slopes, terracing and contour farming may be advisable."

Trees tend to minimize soil erosion, the board believes, in the following ways:

(a) The branches, twigs, and leaves get the first impact of the rainfall.

(b) The layer of duff on the soil is absorptive and assists in percolation. It is stated that every inch of duff in the forest will hold one-fourth inch of rainfall, thus delaying or slowing up the run-off.

(c) The tree roots make possible the loosening of the soil and increasing its water storage capacity.

(d) The tree roots assist in holding the soil in place in the case of an excessive amount of water.

The Soil Erosion Service of the Department of the Interior is conducting a demonstration project covering 125,000 acres, the entire watershed of Limestone Creek, west of Mankato, Kans. The Kansas State Planning Board⁶¹ is cooperating, especially in bringing the results of this demonstration to the attention of farmers in other areas subject to erosion.

The Minnesota Planning Board points out⁶² that while only a small portion of the State has sufficiently rugged topography to make water erosion a special problem, the entire State is faced with the more insidious problem of wind erosion. While crop rotation practices have prevented serious erosion where used, vigilance still is necessary. The following measures are recommended by this planning board:

Preventive measures:

1. The taking of steep woodland out of pasture and dedicating it to watershed protection and tree growth.

2. Taking the steeper cultivated land out of such use and placing it in permanent pasture, sod, or hay crops.

⁵⁷ Preliminary Report of Arkansas State Planning Board, Sept. 1934, p. 92.

⁵⁸ Progress Report, September 1934, p. 4.

⁵⁹ *Ibid.*, pp. 39-45.

⁶⁰ Iowa State Planning Board Report, April 1935, pt. 1—Land, p. 17.

⁶¹ Progress Report, Kansas State Planning Board, September 1934, p. 70.

⁶² Report of the Planning Board, October 1934, pt. 11, p. 31.

3. The more general use of sod strips in cultivated fields to prevent gullying.

4. The adoption of strip cropping where conditions make it advisable.

5. The general adoption of contour plowing and terracing for the control of sheet erosion.

6. Limited pasturing of the steeper hillside pastures. Corrective measures:

1. Tree planting.

2. Use of soil-saving dams.

The New Mexico State Planning Board reports that overgrazing is the principal cause of large areas of serious erosion.⁶³ That and the attempt to cultivate land not suited to the raising of crops are responsible for the ruin of hundreds of thousands of acres of grazing land and thousands of acres of fertile valley land. It is now threatening the usefulness of a 25-million-dollar investment in dams and other irrigation structures.

The New York State Planning Board has found some areas in the State where there is danger of erosion, but no serious damage has yet been done, and it is to be hoped the problem has been faced in sufficient time to prevent serious losses.⁶⁴

In Pennsylvania the State Planning Board reports that soil erosion surveys indicate that half the topsoil of the State has been lost in approximately 100 years of farming. Improved systems of crop rotation, strip farming, contour plowing, and permanent pasture or forests on the steeper slopes can stop the losses of topsoil.⁶⁵

The Progress Report of the South Dakota State Planning Board contains the following explanation of the erosion situation:⁶⁶

"Owing to the methods of farming employed in South Dakota during the last half century * * * the soil in general has deteriorated. The deterioration is both chemical and physical. There has been a marked decrease in the amount of organic matter contained in the soil, and as a result the physical structure of the soil has been greatly impaired * * * resulting in a decrease in its water-holding capacity and a decrease in the nitrogen supply. Owing to the fact that the structure of the soil has broken down, the movement of soil particles by the wind and by running water has greatly increased. Over large areas the soils are drifting badly, and in some areas, where the slopes are steeper, erosion by running water is also becoming a serious problem." The Soil Erosion Service of the Department of the Interior has started a demonstration project in the State, which it is hoped will help the farmers to avoid further losses by erosion.

⁶³ Preliminary Report, December 1934, pp. 38-43, and Progress Report, April 1935, pp. 88, 89.

⁶⁴ Summary Report of Progress to the Governor, January 1935, p. 32.

⁶⁵ Preliminary Report, December 1934, p. 96.

⁶⁶ Progress Report, Mar. 15, 1935, pp. 120, 121.

A special report of the Tennessee State Planning Board⁶⁷ proposes agreements with the farmers to plant winter pasture or cover crops after cultivated crops are harvested, to limit the area in cultivated crops, and protect the soil against erosion.

The Utah State Planning Board suggests⁶⁸ that "through the medium of zoning the counties could regulate the use of land and protect it from overgrazing, water and wind erosion, isolated settlement, and many other evils now attending the use of land." The large mass of data on the economic loss, hardships, and even deaths caused by dust storms and other forms of erosion in many States strengthens the case for county zoning.

In Colorado the State Planning Board in cooperation with State and Federal forestry departments has made a plan for a series of 6 shelterbelts, each 10 miles wide, within which trees would be planted in strips about 140 feet wide.⁶⁹ The belts are laid out in a generally east-and-west direction, because the destructive winds come generally from the northerly or southerly direction. Variations in topography, soil, and ground water cause variations in the plan. Strip planting of crops is being urged as a temporary measure for the control of soil blowing and estimates made by the county agents show that nearly 1½ million acres should be included in the plans for control. Relief work of this character should undoubtedly take precedence over local road building and similar projects in this area which is specially threatened by wind erosion.

The situation in Idaho does not seem to be so urgent, for there the State Planning Board recommends⁷⁰ "that soil erosion control be continued in demonstration areas for the purpose of stimulating individual activity in control of eroding lands. This must be accomplished by demonstrating that it is a profitable phase of operating the farm business. Considerable additional research must be carried on in order to determine the effect of erosion on irrigated lands. It is urged that this research be undertaken immediately."

The State Planning Consultant for Illinois⁷¹ finds that the work for the control of erosion, as carried on by various agencies in the State, has been beneficial and recommends that it be continued and guided by adequate research and planning.

In speaking about the unirrigated areas of central and eastern Washington, the State Planning Board says:⁷² "If wheat farming is continued, this land will become practically worthless. The alternating wheat and summer-fallow system which is being followed in this region causes the organic matter to be used up, and wind ero-

⁶⁷ Rural Land Uses in Tennessee (Nov. 30, 1934).

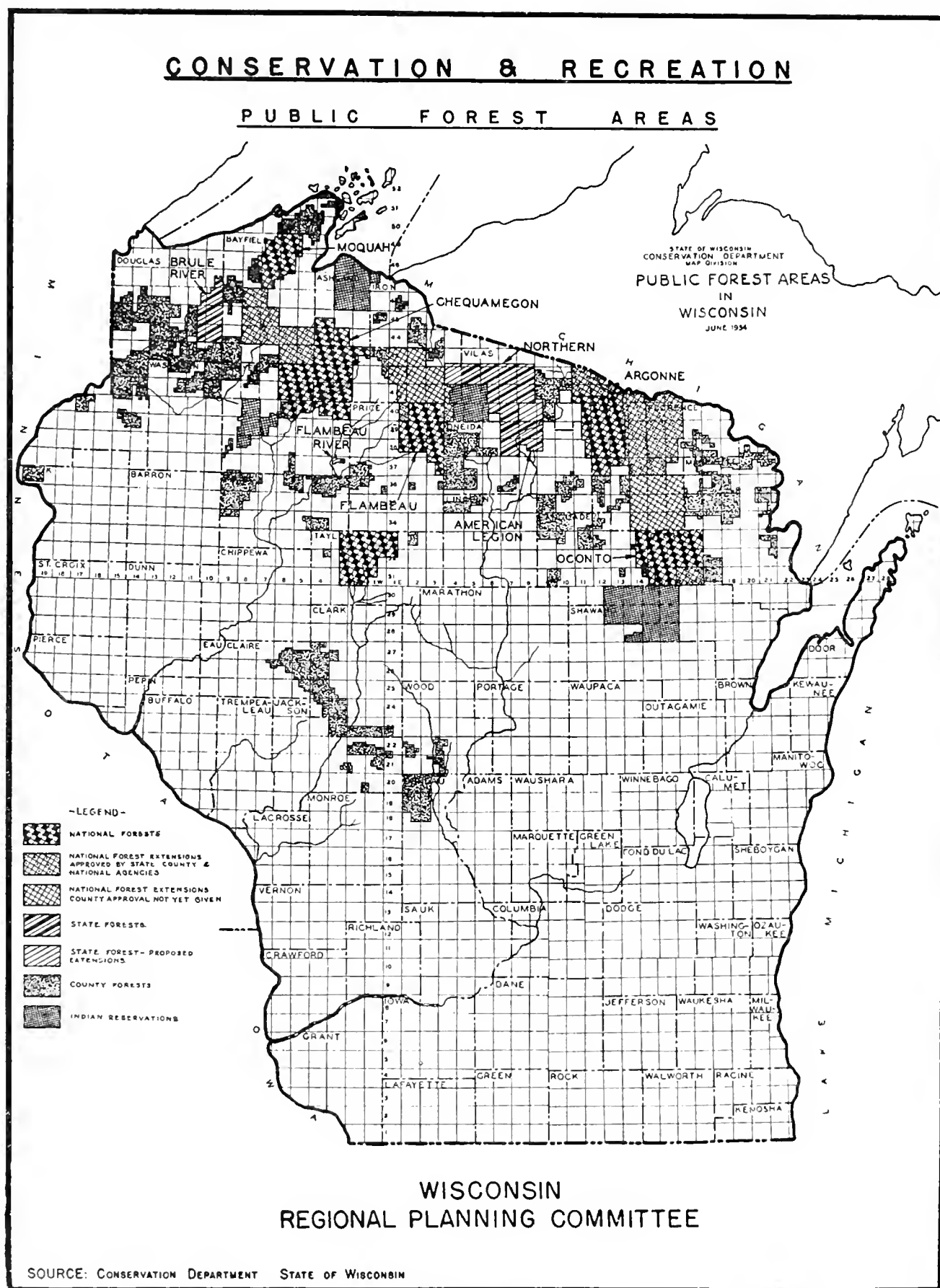
⁶⁸ Progress Report, Apr. 15, 1935, p. 136.

⁶⁹ Preliminary Report, Aug. 12, 1934, p. 56.

⁷⁰ Progress Report, December 1934, p. 10.

⁷¹ Progress Report, September 1934, p. 4.

⁷² Major Land Use Problems and Policies for Washington, Nov. 23, 1934.



From "Planned Progress through Federal, State, and Local Cooperation," August 1934.

sion will increase to the point that the land will gradually become a series of sand dunes. By taking this land out of wheat production and reseeding it to native grasses, such as crested and slender wheat, this land can be made useful."

An interesting experiment at the Northwest Erosion Experiment State Farm, near Pullman, is described as follows:⁷³

"* * * on two identical plots of ground, one plot being in summer fallow and the other having a grass cover of crested wheat grass, the following results were obtained: The run-off from the crested wheat plot during the crop year 1933-34 was only 1 gallon, while the run-off from the plot in summer fallow was 1,500 gallons. This is a startling example of what is going on year after year under the system of summer-fallow wheat farming in this area."

The Oregon State Planning Council has a special committee on "watersheds and erosion", which is to be

⁷³ Ibid.

concerned first, "in the conservation of the water resource insofar as it is related to erosion, and second, in the conservation of the soil resource as to the permanency of its placement. The field is one peculiarly adapted to planning as the injurious effects often pass unnoticed because the action is usually slow and continuous, the cause of the damage is often far removed from the actual damage, and individual initiative has not adequately controlled the problem in the past."⁷⁴

The report of this committee covers watersheds for domestic and commercial water supplies, erosion in Oregon as affecting irrigation and hydraulic power development, areas especially subject to damage by erosive power of floods, forests and erosion, erosion on grazing lands, erosion on farm lands, and recommended projects.

⁷⁴ Oregon State Planning Council—Program to End of 1935, p. 3.

FOREST PROBLEMS

Arguments for forestation and reforestation of extensive areas were advanced by many States. The commercial aspects were put forward in Florida,⁷⁵ for instance, which believes that with the probability of an increase in paper manufacturing in the State the conservation of forest resources is of vital importance, particularly to the rural population, who may thus be afforded supplementary employment in the forests to maintain a reasonable standard of living. The State Planning Board⁷⁶ estimates that the forest wealth of the State has been depleted to less than one-fourth of its original value, and points out that this exhaustion of the timber supply adversely affects the State not only from the standpoint of timber products exported to other States but also from the standpoint of the State's own requirements for building purposes.

Other benefits of forests to the country, outside of the purely commercial aspects, are also stressed in the State planning reports.⁷⁷ Forests protect watersheds, conserve moisture, and aid in preventing floods and soil erosion. Forests are refuges for many forms of wildlife, and serve as havens for nature lovers and playgrounds for those who seek outdoor recreations.

The Iowa State Planning Board⁷⁸ advocates forests where (1) the topography is steep; (2) the soil is easily eroded when the surface is disturbed, and the areas are not suited for a forage crop; (3) the soil is gullied, due to incorrect cropping methods in the past, to such

an extent that ordinary cropping procedure is not feasible; (4) the soil is unproductive due either to lack of native fertility or to impoverishment through misuse; (5) game, recreational, or watershed values outweigh the crop productive value of the soil.

Forestation and reforestation are important to Oklahoma. The State Planning Board⁷⁹ declares that because of steep slopes and the susceptibility of the soils underlying most parts of the forest area to erosion, no further clearings should be made within it. Large acreages of land, cleared and now eroded to the point of being valueless, should be reforested. Even while second growth in the forests is too small for logging, the improved appearance of the forest areas and the better regulated flow and improved conditions of the streams are likely to produce greater use of the wild areas for outdoor recreation. Eastern Oklahoma has tremendous potential possibilities along these lines.

The Wisconsin regional plan report⁸⁰ states that it has been estimated that at least one-fourth of Wisconsin should be in forests for watershed protection, flood and erosion control. The report recommends three types of forests: (1) Public and private forests (including farm woodlots) whose main function is to produce timber, pulpwood, fuel, and other forest products; (2) "protection forests" for watershed protection and erosion control. (These may or may not yield wood and timber as byproducts but they usually can serve as recreational forests.) (3) Recreational

⁷⁵ Report on Land Use Problems, Florida State Planning Board, pp. 28, 29.

⁷⁶ Report on Land Use Problems, Florida State Planning Board, pp. 26, 28.

⁷⁷ Indiana State Planning Board. Preliminary Report 1934, p. 104.

⁷⁸ Iowa State Planning Board Report, April 1935, pt. 1—Land, pp. 24, 25.

⁷⁹ Preliminary Report of (Oklahoma) State Planning Board. Sept. 7, 1934, pp. 40-45.

⁸⁰ Wisconsin Regional Plan Report, 1934, p. 269.

forests either for their esthetic value or as a home for game and fish. This use is not inconsistent with (1) and (2) but land which is submarginal for commercial forests may often be utilized profitably for recreational forests.

Surveys

Forest surveys have been undertaken or recommended by various State Planning Boards. The Arkansas Board⁸¹ studies the amount, location, and ownership of virgin forests in the State. A similar study of commercial forestry in Wisconsin⁸² brought to light the tremendous decrease in virgin timber stands. The Indiana Board⁸³ presented a map showing the forest areas in that State. The Iowa State Planning Board⁸⁴ conducted a forest and waste-land survey, the first purpose of which was to obtain complete information relative to existing forest land, waste land, and badly eroded land in each land section of Iowa. The second aim was to use this information in selecting the areas in Iowa which it would seem desirable to have in forests. It is hoped that there may be developed a program for employment in the forest areas for those who live nearby and who are in need. Maine⁸⁵ studied the location and area of national, State, and town forests. The New York State Planning Board⁸⁶ presented a preliminary statement on forestry, including reforestation, forest planting on farms, purchase of existing forests, trends in production and consumption of forest products, and fire protection. The Forestry Committee of the New York State Planning Board⁸⁷ has recommended that a State-wide forest survey be conducted to furnish data regarding the amount of standing timber by species, its rate of growth and decay, and measures which will permit the building up of the growing stock to a condition of maximum annual production. This survey will be of greater value if the State is first divided into local units, each with a predetermined wood-manufacturing center. It will then be possible to map transportation routes and define the approximate limits of each area supplying a given utilization center. A study and report⁸⁸ on wood utilization in New York State has already been made.

⁸¹ Preliminary Survey of Land Utilization and Land Use Problems in State of Arkansas, part II, pp. 2-4.

⁸² Wisconsin Regional Plan Report, 1934, pp. 221-242.

⁸³ Indiana State Planning Board, Preliminary Report, 1934.

⁸⁴ Iowa State Planning Board, Progress Report, September 1934, p. 4.

⁸⁵ Report to the National Resources Board, March 1935, Maine State Planning Board, p. 13.

⁸⁶ New York State Planning Board, Progress Report, September 1934, ch. VI, pp. 1-14.

⁸⁷ New York State Planning Board, January 1935. Summary Report to Governor Lehman, p. 46.

⁸⁸ New York State Planning Board. Staff Reports A-1, p. 1.

The Oregon State Planning Council⁸⁹ recommends that sufficient appropriations be made to complete the Federal forest economic survey, with sufficient additional appropriations annually thereafter to keep the data up-to-date. The council considers the information made available by this survey essential to the determination of logical sustained yield units and valuable in providing an accurate record of the status of the forest resources of the Nation.

Questions Requiring Special Study

Numerous questions requiring special study were suggested by State Planning Boards.

The New York State Planning Board⁹⁰ recommends research studies to determine the proper species of trees to be planted on reforestation areas with the view of obtaining the most efficient utilization of the future saw timber. The board points out that if the State's reforestation areas become production forests, the marketing of this timber will become a State problem.

The Minnesota State Planning Board⁹¹ calls attention to the desirability of special study by experts in both forest management and market demand for forest products, of the question of intensity of technical management. The board also recognizes the necessity of studying from many points of view the various matters of policy involved in the allocation of forest management to State or Federal agencies, and recommends that no changes be made in the present boundaries of jurisdiction without joint discussion of the matter by the United States Forest Service, the State Conservation Commission, the National Resources Board, and the State Planning Board.

Methods of controlling forest operations appear important to the Maine State Planning Board⁹², which has recommended that some means of limiting lumber operations on important watersheds be established. The board further recommends that commercial forest owners be educated to the fact that persistent systematic methods of forest control will increase their yearly profits and tend to prevent a timber shortage.

The Oregon Council⁹³ reports that while important and material progress has been made in protecting the valuable timber resources of the State from fire the problem is far from solved.

The forest situation in Oregon is reported as follows: (1) The State is heavily dependent upon forestry as a

⁸⁹ Oregon State Planning Council, Forestry Division Program to End of 1935, p. 6.

⁹⁰ New York State Planning Board. Staff Reports A-1, p. 7.

⁹¹ Minnesota State Planning Board. October 1934, pt. II, pp. 68, 69.

⁹² Maine State Planning Report (Three Months Period Ending Aug. 20, 1934), p. 139.

⁹³ Oregon State Planning Council—Program to End of 1935. Forestry Division, pp. 1-11.

basis for industries, pay rolls, and support of other industries; (2) forestry under sustained yield management is a very great social asset; (3) forestry, today, is suffering from the effects of unstable private timber ownership, over-production of wood products, and forced liquidation under wasteful practices, which result in the devastation of forest-growing stocks, with an aftermath of industrial wreckage and abandoned settlements. The suggested remedy for this is the application of sustained yield practices, with the objective of maximum production, to all private lands primarily valuable for growing forest crops and to all public forest land allocated to the production of forest crops. To accomplish this objective the Oregon State Planning Board⁹⁴ recommends Federal legislation to facilitate the establishment of sustained yield forest management by providing Federal credit at low rates of interest and by providing Federal appropriations to continue surveys and research. The board further recommends administrative action to provide for (1) tariff protection of forest products; (2) management of forest lands on multiple basis; (3) survey and program for wildlife resources; (4) survey on erosion; (5) studies of the utilization and protection of forest products.

Forest taxation received the attention of various State Planning Boards. The California Board⁹⁵ reports the shameful misuse of forest areas due in part to an antiquated tax system.

The Florida Board⁹⁶ declares that, as a general rule, privately owned tracts, where owners are financially able to carry them, should remain in private ownership. However, to continue any large acreage of forest lands in private ownership will require a revision of taxation methods favorable to this end. Since the public has an interest in forest preservation and has the right to protect itself against wasteful forest use and social loss resulting from devastation, it should pay its fair share of the costs of action required of owners for the public benefit. No more equitable way of distributing the public's share of such costs than by tax revision can be devised. It is recommended that legislation be framed to lower taxes on forest lands to a nominal annual amount where owners agree to engage in fire prevention and sound forestry practice. In addition to the nominal tax per acre there should be a severance tax applied at the time of liquidating the forest crop. Such a tax would be fair in principle, and from it would be derived needed revenue. Proceeds of the tax should be divided between the State and county governments. Some such

method would give incentive for the recovery, by private owners, of tax delinquent cut-over land and would make possible the retention, by private owners, of cut-over and timber-producing lands which have not yet become delinquent. A tax measure of this type is designed not only as an aid to private forestry but as a measure to protect the public interest by insuring an adequate and continuing supply of timber, means of employment, and a broadened and protected tax base.

Shelter belts received the attention of the South Dakota Planning Board⁹⁷ whose consultants considered the most important forestation problem in the State the establishment of shelter belts and groves which may have some beneficial effect in retarding wind action and may therefore prove economically profitable. Considering it desirable to conduct an independent study of shelter-belt possibilities in order to be able to cooperate more fully with the shelter-belt authorities, the planning board asked the United States Forest Service for the technical services of a forestation consultant to supervise such a survey. The planning board will also study the possibilities of planting groves outside all municipalities in the State.

The Minnesota State Planning Board⁹⁸ has considered the possibility of developing farm-forest communities in and about some of the public forests. In England, from 50 to 100 families have been established on a number of forest divisions to assist in tending the forests. Each family is given a small plot of ground, a cottage and other necessary buildings. They are guaranteed 150 working days' employment each year but, as a matter of fact, are employed almost continuously when not engaged upon their holdings. It may be possible to build up this type of farm life in parts of northern Minnesota by creating regular forest employment. At the present time, work in harvesting wood crops is at low ebb because of the depletion of the forests, but there is an immense amount of work to be done in building up and managing the forests. If this can be established and systematized by the State and Federal Governments, the possibilities for part-time work will have considerable bearing upon farm and community life in the region. While there may be little or no room for taking care of city workers in this way, at least the settlers already in the region will be taken care of and the drift of workers toward the cities checked.

Privately Owned Forest Lands

Maine is among the States making surveys and other studies of privately owned forest lands. The Maine

⁹⁴ Oregon State Planning Board. Six Months Progress Report July 1934-January 1935, Vol. 1, pp. 19-20, 22-25, 27-29.

⁹⁵ Report of California State Planning Board, 1934, p. 110.

⁹⁶ Report on Land Use Problems. Florida State Planning Board, pp. 60-61.

⁹⁷ South Dakota Progress Report, Mar. 15, 1935, pp. 51, 53.

⁹⁸ Minnesota State Planning Board, pt. II, pp. 35, 36.

State Planning Board ⁹⁹ prepared a map showing farm woodland and forest land under private ownership, by counties.

Except for the newly created State parks, all forestry work conducted in Florida by the Florida Forest Service and cooperating landowners is concentrated upon privately owned forest lands.¹ Before cooperatively organized fire prevention and control activities are commenced upon these privately owned lands, the current taxes must be paid and the landowner must manifest substantial interest and give assurances that the work will continue indefinitely. Because of limited finances and a desire to assist as many of the timber owners in the State as possible, the maximum period of cooperation is 5 years, except in the case of county-wide organizations. After this period the owner must finance his own protection, and the State funds are diverted to new cooperators.

In New Hampshire ² it is suggested that direct aid might be given to privately owned forests by the following methods: (1) Adjusting the tax so that forest lands would bear only their proportionate share; (2) making public loans to private forest industries at low interest rates, provided operations are adjusted to sustained-yield management; (3) public aid in road construction and fire protection; (4) public aid in insect control; (5) public regulation to assure at least minimum silviculture standards; (6) public acquisition to enable private owners to liquidate their holdings; (7) reduction of the excessive volume of timber going to market so as to permit a sustained-yield practice; (8) public aid to assist in the distribution of planting stock to farmers.

The Oklahoma Board ³ points out the need of finding some means of reducing the burden imposed upon privately owned forest areas. The Board believes that this objective can be largely accomplished by the consolidation or elimination of local governments in forest areas and by an improved system of taxation of forest land. They, of course, recognize fire protection as absolutely essential in the growing of trees, the only possible crop on about 12 million acres of Oklahoma land.

Iowa ⁴ recognizes the importance of privately owned forest lands in any State or national program for forestry and for land adjustments. The proposed national, State, county, and municipal forests, as well as park areas, will adjust the use of some of the larger submarginal tracts, but unless the individual farmer

makes adjustments in the use of submarginal areas for noncultivated crops, extensive soil losses will continue. A sound forestry program should be worked out for the individual farms of the State.

The Minnesota State Planning Board ⁵ believes that large amounts of the forest land now in private ownership will be publicly owned within the next few years, due largely to tax delinquency. Whether all of this land should be accepted in a reestablished public domain is a question which merits careful study. The board also recommends study of taxation methods to encourage private ownership.

The United States Forest Service is quoted by the New Mexico State Planning Board ⁶ as stating that privately owned forests are cut in order to capture present timber values before recurring tax payments consume all profit. The bulk of these private saw-timber lands are in and adjacent to the national forests. Since private forests frequently fall far short of the standards which can be maintained under public ownership, the privately owned forests should be acquired by Federal purchase as rapidly as possible and made a part of the national forest system. The private owners are reported as strongly favoring this plan, and the State Planning Board favors seeking the necessary State enabling legislation at the first opportunity.

Municipal and County Forests

Municipal and county forests received the attention of the Iowa State Planning Board.⁷ Although they made no definite recommendations for municipal forest areas they believe that municipal forests will probably be considered later in a State-wide conservation program. This would be especially true for cities which are located close to rough or submarginal areas which might serve both as forest and as park areas. The detailed development of municipal forests, they believe, should receive the careful attention of the planning board at a later date. The board reports that it is probable that some of the smaller areas now recommended for State parks might better be handled as county forests in such a way as to realize as fully as possible their recreational values as well as their use for erosion control and timber production. Kansas ⁸ is another State which recommends studies to determine the opportunities for county forests.

State Forests

As would be expected, State-owned forests received detailed attention from State Planning Boards.

⁹⁹ Report to the National Resources Board, March 1935. Maine State Planning Board, p. 13.

¹ Progress Report, December 1934. Florida State Planning Board, p. 41.

² State Planning in New Hampshire, Mar. 15, 1935, p. 41.

³ Preliminary Report of State Planning Board (Oklahoma), Sept. 7, 1934, p. 55.

⁴ Iowa State Planning Board. A State Plan for Land Use, pt. 1, April 1935, pp. 32, 33.

⁵ Report of the (Minnesota) State Planning Board, pt. 1, November 1934, p. 16.

⁶ Progress Report (New Mexico), State Planning Board, Apr. 15, 1935, p. 87.

⁷ Iowa State Planning Board, A State Plan for Land Use, pt. 1, April 1935, p. 32.

⁸ Kansas State Planning Board. Progress Report, Sept. 12, 1934, p. 182.

Desirability of State Forests.

As was mentioned above, Florida forests are at present almost exclusively in private ownership. However, the Florida Board of Forestry is already authorized by law to administer State forests. The planning board⁹ considers State forests desirable and recommends that definite action be taken for the acquisition of such areas by purchase. The board points out that the development of a prearranged percentage of the land area of the State for State forests and State parks would afford employment for a large number of men.

Forests are considered necessary to the well-being of Indiana¹⁰. In developing them, the State Department of Conservation has a two-fold program: (1) To restore and provide forests for the future, and (2) to operate demonstration areas in order to encourage individuals to do likewise. In developing the first part of this program the State forester has prepared a plan suggesting the setting aside of forest areas throughout the State.¹¹ In the better farming areas the forests are recommended not so much for the purpose of retiring submarginal land as for the purpose of having forests accessible to a great many people.

No national forest areas are proposed for Kansas, because the State is largely unsuited for extensive tree growth. The planning board¹² recommends studies of the opportunity for State and county forests which would be less extensive than those normally acquired by the Federal Government, and the appointment, by the State, of an active forester to put into effect a comprehensive and systematic program of forestation.

The Missouri Planning Consultant¹³ states that since only a comparatively small percentage of forest lands can be developed under the auspices of the National Forest Service, it is important that there be developed in Missouri a system of State forests which will not only fulfill their primary function as forests but will also extend further the recreational opportunities of the State.

State forests are a very important factor in Oregon. The State Planning Council¹⁴ has urged that active steps be taken by the State to acquire cut-over lands and young growth stands, together with such quantities of mature timber as may be necessary (and financially practicable) to form areas for efficient management. State ownership of forest lands should be increased from the present area of 125 thousand acres to 2 million

acres. With sustained yield management upon all of the 28 million acres of potential forest land in the State it is entirely possible that forests there can be made to contribute substantially to the support of one-half million people.

A vital argument for growing more timber in Pennsylvania by extending State forest ownership, by better forest protection and management, and by reforesting abandoned farms and idle lands is presented by the State Planning Board.¹⁵ The State is producing only 379 million cubic feet of wood each year but is consuming almost 858 million cubic feet. This means that the State is importing 56 percent of its required wood.

State Forest Surveys

Among the State forest surveys reported by planning consultants are Connecticut's survey¹⁶ of State forests and fireplaces in State forests and Ohio's¹⁷ study of areas of State forests and forest parks, areas suitable for acquisition, areas now receiving fire protection, and areas which now need fire protection. Both of the above surveys were made by the State forester.

State-Federal Cooperation

The Planning Boards of Indiana¹⁸ and Iowa¹⁹ called attention to the possibility that lands for forestry purposes might be purchased in the various States by the United States Forest Service, and then turned over to the States for operation.

In Minnesota the C. C. C. camps and the E. C. W. organization are reported by the State Planning Board²⁰ to have made real progress during the past 2 years in work essential to the reestablishment of commercial forests in the State. The Board recommends the continuation of this work under the joint technical direction of the United States Forest Service and the State Department of Conservation. It is estimated that several thousand men can be employed continuously for several years in rebuilding the forest resources.

State-owned timberlands in New Mexico are in general being handled under the terms of a cooperative agreement between the Commissioner of Public Lands and the Secretary of Agriculture, authorizing the Forest Service to cooperate in appraising timber offered for sale on State lands, and administering the sale when made.²¹ The State lands on which forest

⁹ Progress Report, December 1934, Florida State Planning Board, p. 48.

¹⁰ A report of the Consultants of the State Planning Board of Indiana for the period ending Feb. 22, 1935, p. 44.

¹¹ Indiana State Planning Board. Preliminary Report 1934, p. 121.

¹² Progress Report. Kansas State Planning Board. Sept. 12, 1934, pp. 53, 82.

¹³ Preliminary Report, 1934, Missouri State Planning Board, pp. 15, 56.

¹⁴ Oregon State Planning Council; Program to end of 1935. Forestry Division, pp. 3, 9.

¹⁵ Pennsylvania State Planning Board. Preliminary Report, December 1934, p. 139.

¹⁶ Condensed Report on Planning for Connecticut. State Planning Board, Second Six Months, p. 22.

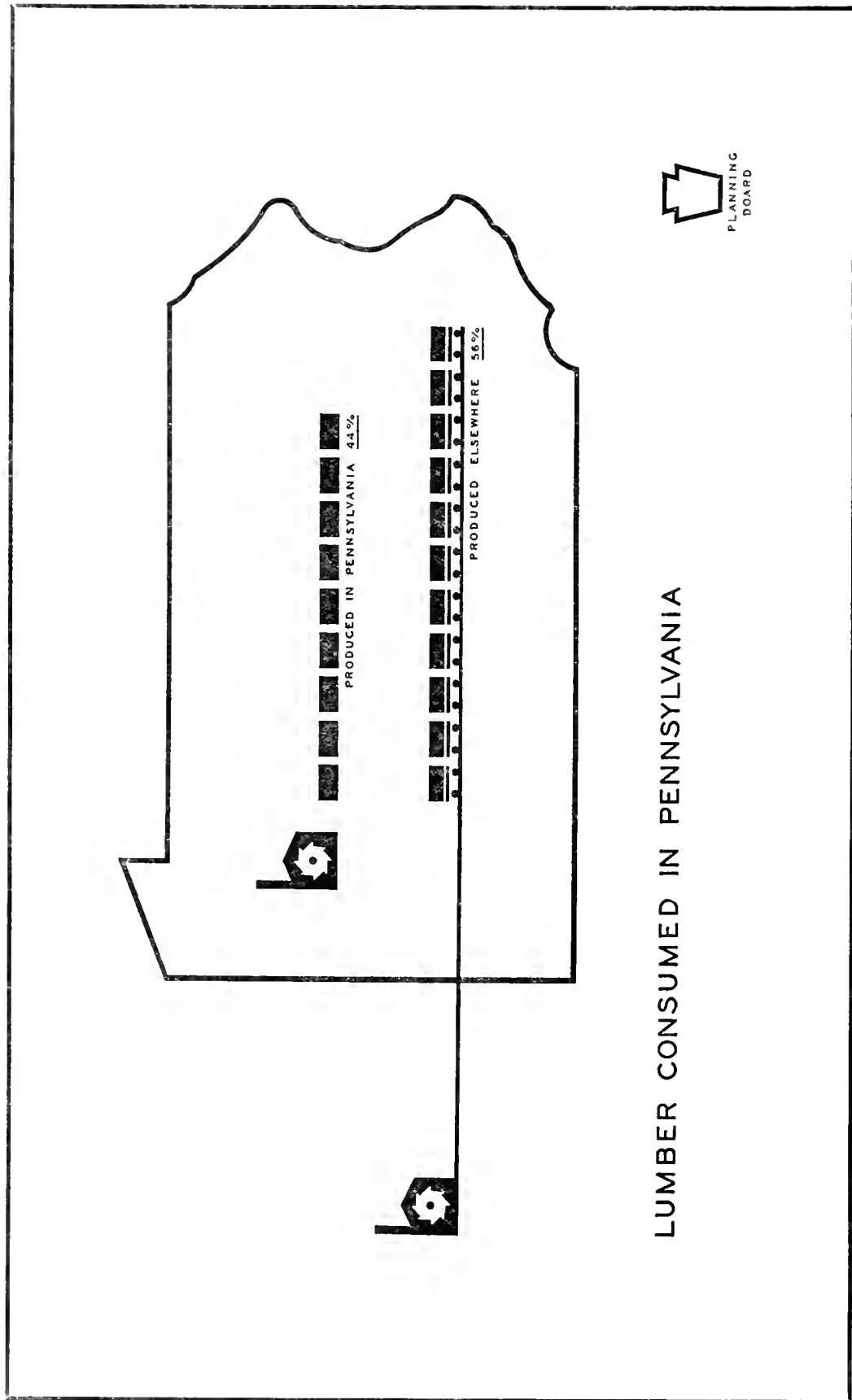
¹⁷ Preliminary Reports (Ohio) State Planning Studies, Aug. 15, 1934, chap. 11, p. 29, exhibit II-22.

¹⁸ Indiana State Planning Board. Preliminary Report 1934, p. 115.

¹⁹ Iowa State Planning Board. A State Plan for Land Use, pt. 1, April 1935, p. 30.

²⁰ Report of the (Minnesota) State Planning Board, pt. I, November 1934, p. 23.

²¹ Progress Report (New Mexico) State Planning Board. Apr. 15, 1935, p. 86.



From "Preliminary Report", Pennsylvania State Planning Board, December 1934.

crops are harvested under this cooperative agreement are left productive for future crops of timber. Steps are being taken for the exchange of State timbered holdings within the national forests for public grazing lands of equal value.

Special Aspects

State forests were discussed from three points of view in the planning-board reports of New York State, Oregon, and Oklahoma, respectively.

The New York Board²² calls attention to the fact that to round out and complete the State forestry program the State's reforestation plan should be supplemented by the purchase and management of a fair proportion of existing forest areas in addition to the Adirondack and Catskill Parks. Since some of the trees which are now being planted will not mature for 50 years or more, unless the State acquires partly grown forests it cannot promote continuous forest production for a generation to come, nor can it assure a continuous flow of raw materials to local industries.

The acquisition committee of the Oregon State Planning Council²³ recognizes the serious problem of financing local governments and therefore recommends that where lands now contributing to the support of local and State governments are acquired either by the State or Federal Government, some equitable system of financing an annual contribution to the support of the State or local government be provided.

The Oklahoma State Planning Board²⁴ recommends as minimum requirements for a State forest an area of 75 thousand acres or more of forest land, bearing a suitable stock of forest growth. The following are the recommended purposes to be served by State forests: (1) Demonstration areas to show benefits of fire protection and proper silvicultural, logging, and management practices; (2) flood control and erosion prevention; (3) timber production; (4) outdoor recreation facilities; (5) game refuges; (6) public shooting grounds and fishing waters.

National Forests

Many State Planning Boards advocated the extension of national forest holdings within the State, for various reasons. The argument most frequently advanced to justify these additional acquisitions was the advantages resulting from the efficient management of the United States Forest Service. The California Planning Board²⁵ declares that the management in

that State of national forests totaling approximately 19 million acres by the U. S. Forest Service has had a salutary effect on management standards in the rest of the State. In New Mexico,²⁶ the forests, practically all of which are national forests, are said to be in good condition, adequately protected, not in need of reforestation, and managed so as to maintain the productivity of the land and resources and thus stabilize the communities depending upon the forest. The South Dakota Board²⁷ states that the establishment of Federal forest reserves has proved very beneficial to the welfare of the forested areas. The efficient management of the Forest Service has checked fire hazards and conserved forest pastures. In addition to this their administration has increased the economic yield. When the Forest Service first began operations in the two Dakotas in 1898, the two States combined furnished only 30 odd million feet of lumber per year. In 1929, the output of lumber from South Dakota forests alone amounted to 59 million feet, of which 29 million feet came from the national forest reserves. It is pointed out in the State of Washington,²⁸ where in certain regions much of the poorer lands are tax delinquent, that if much of this land were under supervised national forest management it would return some revenues to the counties in which it is located, instead of being a liability. Pend Oreille County is unique in the State of Washington because it is run on a cash basis. This has been possible largely because of the income which it receives from the Kaniksu National Forest.

There is only one national forest in Maine.²⁹ It is unlikely that this forest will be enlarged or that additional national forests will be created because Maine will not allow her land to become part of the Federal domain without reserving water power and certain other rights, and the Federal Government will not take over land for national forests under these conditions.

Recreation in the National Forests

Recreation possibilities in national forests were emphasized in the planning reports for Iowa and Kentucky. In Iowa,³⁰ the National Forest Service has proposed the development of the federally owned areas in the State for recreation as well as timber production, in a multiple-use program. Access by trail or road will be provided to the timbered areas and artificial lakes may be developed where natural lakes are not available.

²² New York State Planning Board, January 1935. Summary Report to Gov. Herbert H. Lehman, p. 44.

²³ Oregon State Planning Council. Program to end of 1935, p. 10.

²⁴ Preliminary Report of (Oklahoma) State Planning Board, Sept. 7, 1934, pp. 49-52.

²⁵ Report of California State Planning Board, 1934, p. 21.

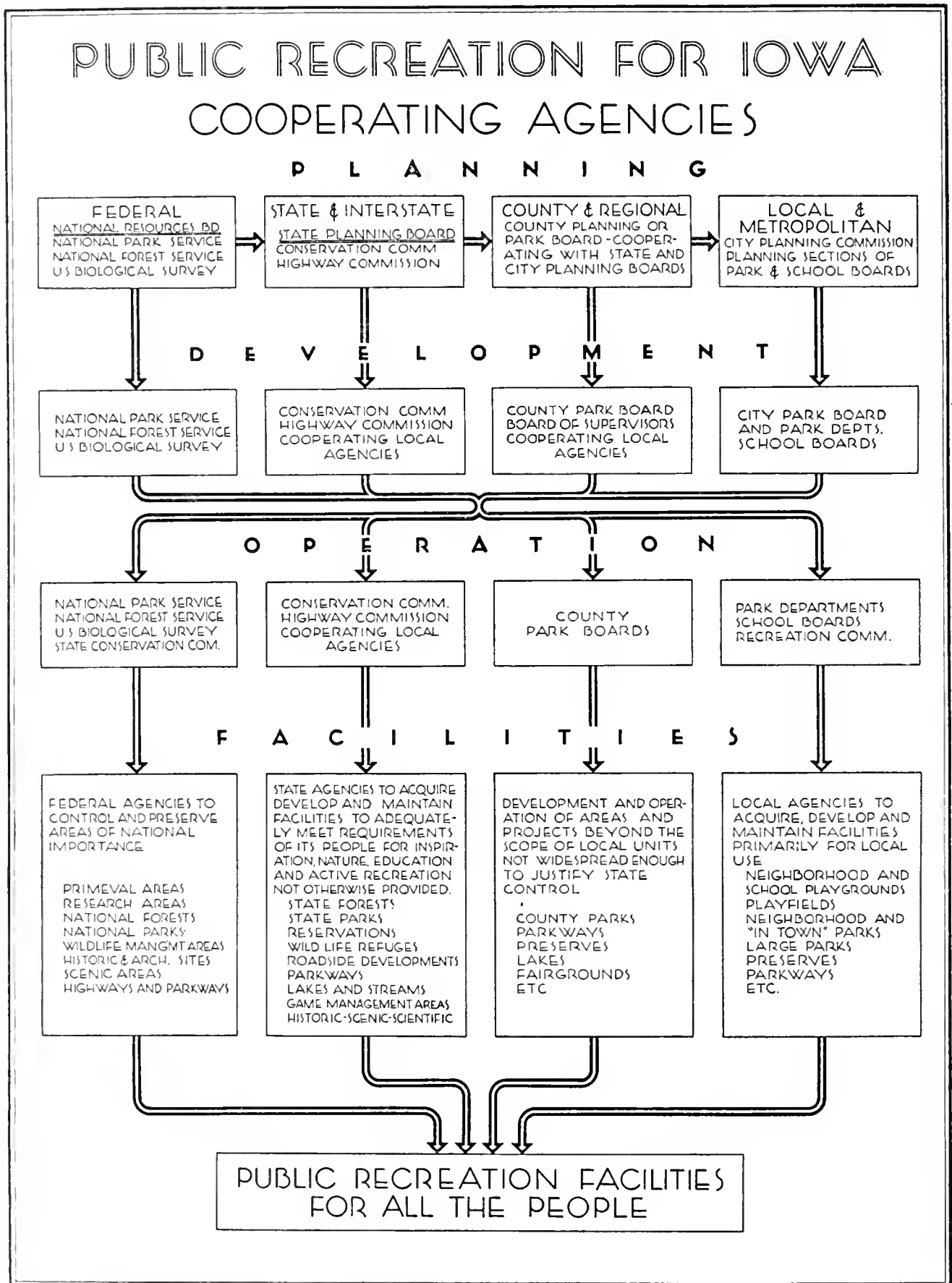
²⁶ Progress Report (New Mexico) State Planning Board, Apr. 15, 1935, pp. 9, 86.

²⁷ Progress Report (South Dakota) Mar. 15, 1935, p. 51.

²⁸ Major Land Use Problems and Policies for Washington, Nov. 23, 1934, p. 10.

²⁹ Maine State Planning Report (Three Months Period Ending Aug. 20, 1934), p. 134.

³⁰ Iowa State Planning Board, A State Plan for Land Use, pt. 1, Apr. 1935, p. 29.



In Kentucky,³¹ where the primary purpose of one of the national forests is the protection of watersheds, roads and other necessary facilities for recreation will be developed.

National Forest Surveys and Studies

Proposed national forest purchases and approved national forest purchase units are presented by the Iowa State Planning Board.³² The Oregon State Planning Council³³ prepared a proposal for the Federal acquisition of lands for national forests. The

³¹ Preliminary Report on a Series of State Planning Studies, Kentucky State Planning Board, September 1934, p. VI-7.

³² Iowa State Planning Board Report, April 1935, pt. I, Land pp. 25-27.

³³ Oregon State Planning Council, Program to end of 1935, Forestry Division, p. 8.

report of the Utah Board³⁴ contains a survey of Utah national forests by counties and proposals for additions to national forests.

Minimum requirements and appropriate uses for national forests were set forth by the Oklahoma State Planning Board³⁵ as follows: (1) Minimum requirements, especially where timber production is a feature, should be 100 thousand acres of land or more, and 250 thousand acre areas are not too large. Such land should have a reasonable stocking of forest growth as a basis for forest crop. (2) Suitable uses include outdoor recreation, flood control, and erosion prevention, timber production, and division into areas for game refuge and public shooting grounds.

³⁴ A State Plan for Utah, Progress Report, Apr. 15, 1935, p. 115.

³⁵ Preliminary Report of State Planning Board, Sept. 7, 1934, pp. 49-52.

INDIAN RESERVATIONS

Indian reservations come up for consideration in the planning reports of at least three States. In New Mexico,³⁶ Indian reservations present an obstacle to the irrigation of the San Juan Valley, more than half of the irrigable lands of which lie within the boundaries of such reservations. Any development within the Indian reservations requires the cooperation of the Indian Service. It has been proposed that irrigable lands within the Indian reservations, now used for grazing only, be exchanged for other grazing lands of equal value outside the reservation, and that the irrigated portion of the reservation be opened to settlement by white farmers.

The management of Indian-owned timbered lands received the attention of the State Planning Boards of New Mexico³⁷ and Oregon.³⁸ The former reported

³⁶ Progress Report (New Mexico) State Planning Board, Apr. 15, 1935, pp. 60, 61.

³⁷ Progress Report (New Mexico) State Planning Board, Apr. 15, 1935, pp. 86, 87.

³⁸ Oregon State Planning Council, Program to End of 1935, p. 7.

that these lands, insofar as the timber resources are concerned, are being managed very much as are the national forests. However, in order to liquidate standing timber values at a faster rate for the benefit of the Indian owners, the cut is heavier. Production of a new logable crop under these circumstances will require slightly more than the usual length of time, but productivity of the land will not be materially reduced. The Oregon council recommended that all timbered Indian lands be handled on a sustained yield basis and that provision be made for the inclusion of these lands in cooperative sustained yield units, with adequate protection for the rights and income of the Indians.

The Utah State Planning Board³⁹ presented a survey by counties of State lands in possession of the Indian Service.

³⁹ A State Plan for Utah, Progress Report, Apr. 15, 1935, p. 117.

RECREATION PLANNING

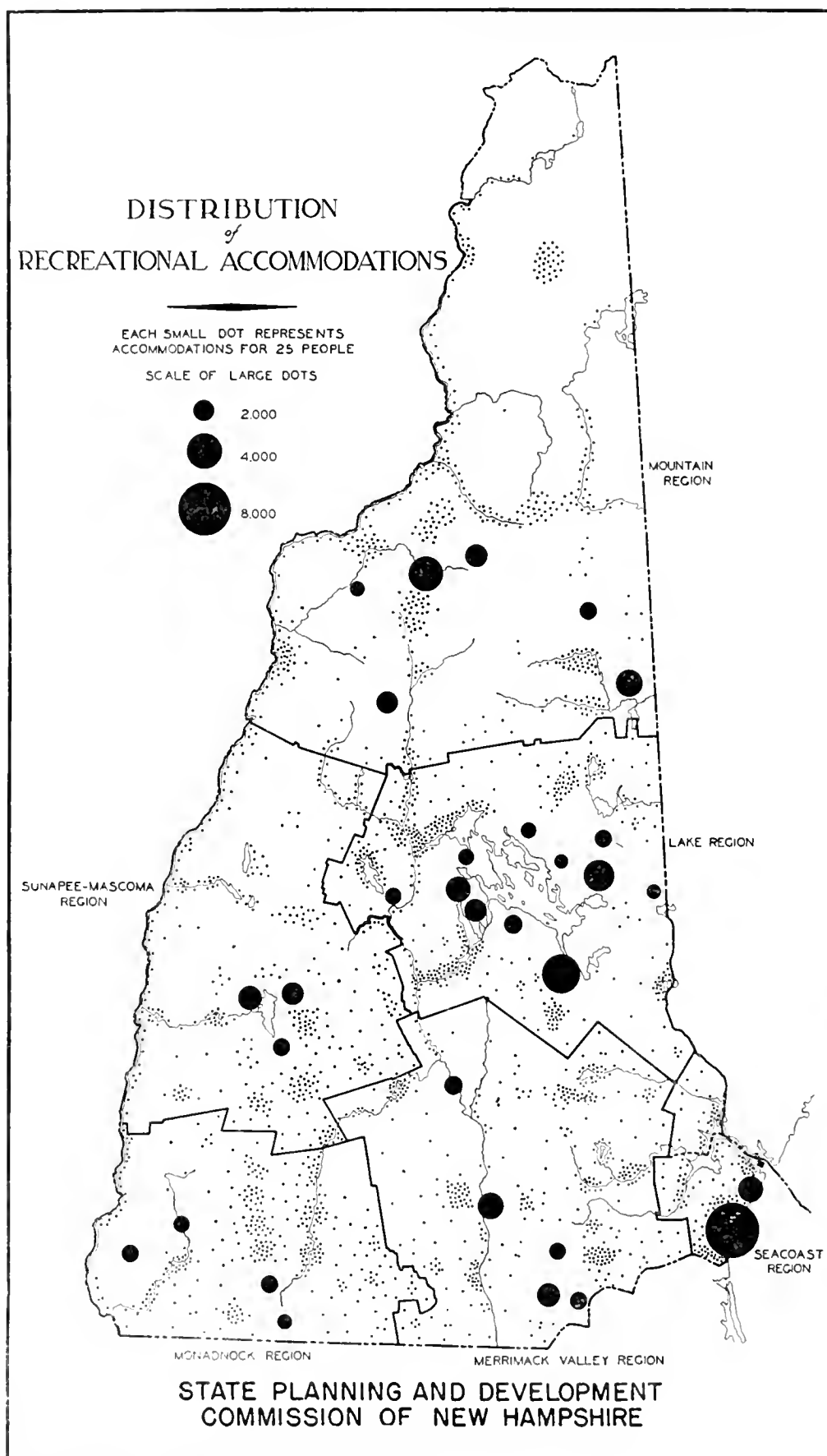
Recreation as a Part of the State Plan

"Millions of people have nothing but leisure on their hands", says the Iowa State Planning Board. "They want work far more than they want recreation but it seems fair to assume that the final disposition of the unemployment problem will see practically this same amount of leisure time on some one's hands, distributed, let us hope, more evenly than at present."⁴⁰

Urban areas are unable to cope with the ever increasing demands for recreation facilities. The records of park development in this country show that management has been made extremely difficult by the inability of the areas to accommodate the recreation load thrown

⁴⁰ The Second Report, Iowa, April 1935.

upon them so that it becomes a State-wide problem of ever increasing significance. The demand for recreation planning on a State-wide scale is further aggravated by the failure of cities during earlier periods of growth to set aside adequate areas for recreation purposes. With high population densities and high land values, it has become practically impossible to provide even half the area and facilities which a well balanced recreation program requires. "It becomes a definite obligation of all governmental agencies to prepare for it. The problem is that of providing on an ample scale through acquisition of relatively cheap land outside the limits of cities, a well planned, diversified system of recreation areas which will serve the people



From "State Planning—New Hampshire", March 16, 1936.

as they cannot at this late date ever be served within the cities. The development of a plan for such a system must start from a thorough understanding of the human interests which such a system is expected to serve."⁴¹ No comprehensive, well conceived and planned program of State-wide recreation has yet been accomplished according to reports from the State Planning Boards, but the gradual preparation of such programs is a task most of the boards have set themselves.

"Recreation can be defined as that broad form of land use which best contributes to man's nonmaterial needs."⁴² Planning for recreational needs on a State-wide scale should be the happy union of social welfare planning and land-use planning. The one is based upon a thorough understanding of the needs and desires of the people, and involves a comprehensive study of population, including number, characteristics, and distribution. The other means the allocation of land to its best uses after thorough analysis of its characteristics. Sometimes the best use of a parcel of land is for the enjoyment of people, but usually purely recreational use can be combined with other uses to excellent advantage.

"Recreational use, although it be the best use, is seldom the only value to be considered, for recreation is intimately associated with the problems of reforestation, game management, lake and stream control, health, urban and rural planning, population, taxation, zoning, transportation, industry, and even unemployment. This complex relationship with other human problems is of utmost importance."⁴³

Paradoxically, recreation has been and will undoubtedly continue to be an important factor in providing employment for the unemployed. This observation is emphatically sustained in a Michigan report. "The conservation program of works projects, including forest, fish, game, and park development, emphasizes again the establishment of the State's recreational resources as a principal means of livelihood and enjoyment. The social and economic desirability of consummation of these projects by both State and Federal Governments goes beyond emergency and local calculations. Civilized society demands these institutions."⁴⁴

The New Hampshire Consultant states: "Aside from the social desirability of providing physical and cultural opportunities for people with increased leisure hours, there is the added opportunity for providing another source of employment of significant magnitude."⁴⁵ State boards recognize need for recreation planning and many have conducted surveys and studies

and developed procedure in tentative form. New Jersey has laid considerable emphasis upon a study of recreation facilities. Its preliminary report contains a summary of State parks, State forests, municipal and county parks, and State fish and game preserves.⁴⁶ It has also suggested procedure and suitable standards. Iowa has contributed an interesting chart showing the relationship of various Federal, State, and local agencies interested in recreation, and their roles in the development of a possible program.⁴⁷ Missouri has conducted a study to determine the need for a State Department of Conservation which would "promote further development and acquisition of new park lands at this opportune time."⁴⁷

State Parks

Objectives in State Park Planning

State Planning Board reports indicate that existing State parks are too few and too small for the populations served, and various boards, therefore, have sought to do three things: (1) To define the objectives of a State park plan; (2) to formulate a procedure for park planning; and (3) to analyze the adequacy of existing methods of park administration.

The New England Regional Planning Commission has summarized some of the major objectives of a State park plan as follows: "We realize that we are facing a period of readjustment in which the wise use of increased leisure time will be most important. Parks, forests, and reservations will play a prominent part in the recreational life of this country. Nearly every State reports a decided increase during the last few years in the use of State parks and forests. In addition, they offer an opportunity for constructive use of unemployed labor, not in competition with private business."⁴⁸ The Missouri State Planning Consultant makes another point: "It will be desirable to absorb as much as possible of the marginal and sub-marginal land into the future parks."⁴⁹ The Planning Boards in Colorado, Kansas, Minnesota, and New Jersey all emphasize the need for providing State parks easily accessible to metropolitan communities.⁵⁰

In regard to specific objectives of a State park plan, there is, as is to be expected, divergence of opinion among the State Planning Boards. However, there would probably be agreement on provision for these types of recreational facilities: (1) Forested areas; (2)

⁴¹ New Jersey, September 1934, pp. 27-33.

⁴² Iowa State Planning Board Report, April 1935, vol. 11, p. 3.

⁴³ Missouri State Planning Board, Preliminary Report, 1931, p. 53.

⁴⁴ New England Regional Planning Board: Progress Report, Oct. 1, 1934, p. 16.

⁴⁵ Missouri State Planning Board: Preliminary Report, 1934, p. 55.

⁴⁶ Colorado State Planning Board: Preliminary Report, August 1934, p. 70 ff.

⁴⁷ Kansas State Planning Board: State Parks and Recreational Areas, March 1935, p. 7.

⁴⁸ Report of the State Planning Board of Minnesota: Part I, November 1934, p. 27.

⁴⁹ New Jersey State Planning Board: Preliminary Report, September 1934, p. 27.

⁴¹ L. Deming Tilton, National Resources Board Consultant, California State Planning Board, Special Report, May 1935.

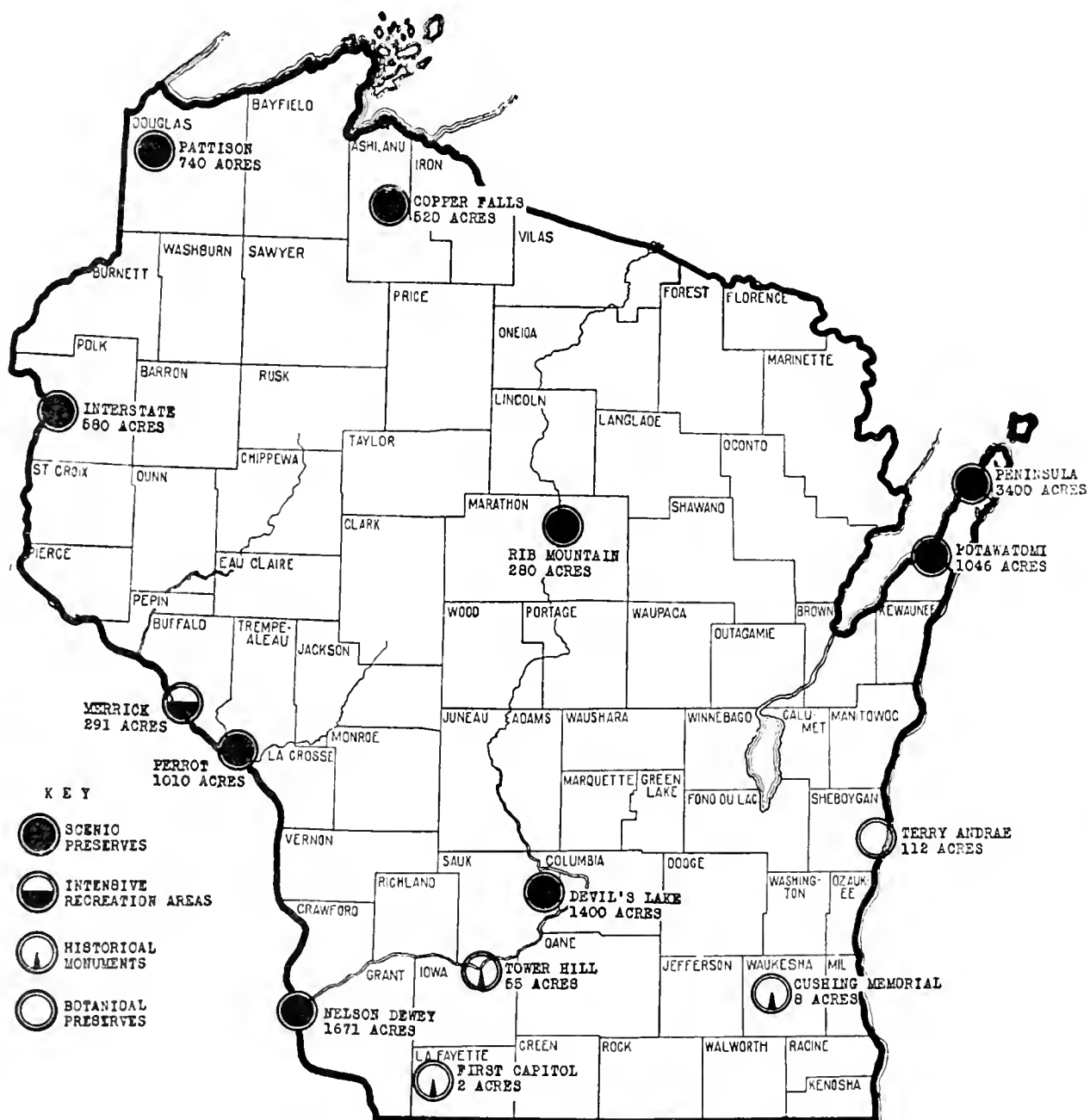
⁴² Wisconsin Regional Plan Report, p. 157, December 1934.

⁴³ Michigan Public Works Inventory and Program, March 1935, p. 6.

⁴⁴ New Hampshire State Planning, 1935, p. 73.

CONSERVATION & RECREATION

STATE PARK CLASSIFICATION



WISCONSIN
REGIONAL PLANNING COMMITTEE

SOURCE: WISCONSIN STATE PARKS, WISCONSIN CONSERVATION DEPT.
NATIONAL CONFERENCE ON STATE PARKS, INC.

lake and stream areas; (3) wildlife sanctuaries; (4) historic sites; and (5) examples of typical State scenery or topography. State parks exist or are proposed for all five of these types. Frequently one park embraces the characteristics of all five types.

The forested area is the typical State park. The New York State Planning Board has recommended that "in connection with plans for reforestation of submarginal farm land, there should be consultation with recreation authorities. In cases where the land involved can be put to definite recreational use", the Board explains, "this will permit the working out of a combined forestry and recreation scheme."⁵¹

The problem of providing lake and stream recreational facilities has become acute in recent years, as private owners of shore property have become less generous in permitting sportsmen to trespass. The problem has been further intensified as the recreational value of many streams has been lessened by power developments. The water problem impinges on the recreational problem at still another point, since flood control measures may mar or enhance existing recreational areas.

State Planning Boards have been giving consideration to these problems. The Indiana Board, for example, proposes an accurate survey of the stream banks of the State, and emphasizes the importance of their acquisition for State parks. In this connection it observes, "probably the greatest opportunity for providing recreational areas in the northern part of the State is on the land bordering streams. The objective should be for the State eventually to own all or a large portion of the land which borders such streams as the Wabash, the Tippecanoe, and the Mississinewa."⁵² The New York State Planning Board reports that "the posting of lands adjacent to trout streams, especially in the vicinity of cities, is fast restricting the sport of fishing to those who have the time and money for an extended trip."

With regard to possible solutions of the problem, the board concludes "though some system of easements or zoning may be worked out that will give the public access to streams and waters in the Adirondacks, or other comparatively remote areas, actual purchase of shore strips seems to be a more practical method in dealing with areas close to the centers of population." Accordingly, there was specifically recommended "the purchase of strips of land from 20 to 200 feet wide along streams and lakes aggregating 1,000 linear miles, in the next 10 years, as a means of providing adequate fishing and to a lesser extent hunting opportunities."⁵³

⁵¹ New York State Planning Board: Progress Report, September 1934, ch. IX, p. 15.

⁵² A report of the Consultants of the State Planning Board of Indiana, Feb. 22, 1935, p. 51f.

⁵³ New York State Planning Board: Progress Report, September 1934, ch. IX, pp. 16f, 22.

The admixture of the recreational problem with power development and flood control problems increases the complexity of State park planning. The Minnesota State Planning Board refers to the State lakes and rivers as constituting "one of the important natural resources of the State providing, as they do, not only water supply for normal industrial and agricultural pursuits, but also remarkable opportunities for recreational development. One of the most important problems of the State is the conservation of these water resources to be used for recreational purposes."⁵⁴ The Kansas State Planning Board reports notable progress in combining recreation planning with flood control and power planning. Pointing out that "additional lakes, both for water conservation and flood control, will be an important factor in extending the park system",⁵⁵ the board gives particular attention to the recreational possibilities of proposed flood-control reservoirs on the Fall, Smoky Hill, and Marmaton Rivers.⁵⁶

State parks serve as sanctuaries for wildlife, and it is consequently important that any plan for the increase of park areas should consider the adaptability of proposed developments to the needs of birds and animals. The Ohio State Planning Board reports that portions of former canal reservoirs have been posted as fish and waterfowl sanctuaries and that some of these reservoirs are surrounded by forested lands which, in many cases, have been converted into State parks.⁵⁷ Reports of other boards emphasize the close relation between recreation and wildlife conservation.

Historic sites may be preserved by constituting them State parks. This has been done in a number of cases. In Kentucky, for example, 8 of the 12 State parks are of the "monument-park or historical-park character."⁵⁸ The Kansas State Planning Consultant has suggested that the State acquire an area in Linn County "because of its connection with early historic events in Kansas, chiefly the activities of John Brown and other characters who had much to do with the stirring events of early Kansas history."⁵⁹

Many State Planning Boards believe that there is value in the preservation of typical or unusual landscape in the State, and consequently recommend that this be considered in the determination of areas for acquisition as State parks. The Wisconsin State Planning Board proposed that "insofar as possible the lands chosen should represent both characteristic types

⁵⁴ Minnesota State Planning Board: Report, October 1934, pt. II, p. 45.

⁵⁵ Kansas State Planning Board: Progress Report, Sept. 12, 1934, p. 53.

⁵⁶ Kansas State Planning Board State Parks and Recreational Areas, March 1935, pp. 10-11.

⁵⁷ Ohio State Planning Board: Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, ch. VI, p. 3.

⁵⁸ Kentucky State Planning Board: Preliminary Report in a Series of State Planning Studies, September 1934, ch. VI, p. 8.

⁵⁹ Kansas State Planning Board: Progress Report, Sept. 12, 1934, p. 182.

of Wisconsin topography and characteristic vegetation growths.”⁶⁰

The Kansas Board recommends the acquisition of “an extensive area of the State to preserve some of the original characteristic scenery for future generations.”⁶¹

The planning boards have placed the emphasis in park planning upon two related aspects of planning procedure: (1) Coordination of recreational park planning with planning for other resources of the State; and (2) enlistment of the cooperation of other Federal, State, and unofficial organizations in formation of the park plan.

The Ohio State Planning Board recommends that “a careful study should be made of conservational needs, not only as related to erosion, reforestation, and sub-marginal land, but as related to ground water, flood control, and stream pollution, also as to the need and urgency for the creation of wildlife sanctuaries.”⁶²

The enlistment of the expert knowledge to be found in other governmental departments and among interested citizens has been found useful toward the formulation of an intelligent State park plan. The Indiana State Planning Board sponsored a study of Dubois County woods, and entrusted the directorship to officials of the Department of Conservation and to foresters of Purdue University.⁶³ The Kansas State Planning Board conducted a reconnaissance survey of areas thought suitable for State parks. The survey was directed by an engineer for the planning board, but the experts participating were in part representatives of the Forestry, Fish, and Game Commission, while the drivers were furnished from the relief rolls by the Kansas Emergency Relief Committee.⁶⁴ The State Planning Board of Ohio relied heavily on the proposals of the Division of Forestry. Recommendations of the Park and Sanctuary Committee of the Ohio Academy of Science were incorporated in the board's report, while most of the archeological and historic sites proposed by the board for acquisition were originally recommended by the curators of the Archaeological and Historical Society.⁶⁵

Administration of State Parks

State Planning Boards have given some attention to problems of acquisition and administration of State parks. The Colorado Board calls attention to the exchange of land between the State and the Federal

Forest Service as a means of increasing particular recreational areas under State control.⁶⁶ The Wisconsin Planning Board, noting the expense involved in outright purchase of land for State parks, has suggested the use of public subsidies “to reward the private land owner for leaving his marshland undrained, for checking the ravages of erosion, for practicing reforestation, and for stocking the land with game * * * Tax reductions to the private owner for conservation and recreation values received logically appears to be the least costly attainment of results when combined with the purchase of sufficient public recreation lands.”⁶⁷

To improve the administration of State park systems, measures for the repeal of hampering constitutional provisions, adequate financing of parks, and the constitution of an agency specifically charged with responsibility for State parks are advocated in planning board reports.

New York provides an example of the effect of the incorporation in State constitutions of restrictive legislation. The planning board of that State says: “The 2,235,000 acres of forest preserve within the Adirondack and Catskill State parks are, owing to the existing constitutional prohibition of the cutting of trees and the injunction that they shall be forever maintained as ‘wild forest land’, of somewhat less value for recreational uses and for hunting and fishing than they might otherwise be. For example, were it not for these rigid restrictions, small ponds or lakes could be constructed, small clearings could be made for the purpose of increasing the supply of game food, and provision for camping and for trails could be much more satisfactory.”⁶⁸

The promise of adequate funds for the acquisition and development of State parks is a central problem of park administration. In Kansas “the only funds available for park maintenance come from the sale of fishing licenses and the lease of cabin sites and other facilities.”⁶⁹ The Pennsylvania State Planning Board has adjusted its program for the acquisition of game lands to the estimated receipts from hunters' license fees. With a plan for the purchase of 601,331 acres of land, the board estimates that the plan should be effected in 8 years, since the portion of the hunters' license fees available for land purchase permits the addition of about 75,000 acres of land annually at present prices.⁷⁰

The Ohio State Planning Board has put the question, “What is the type of administrative organization best

⁶⁰ Wisconsin State Planning Board: Regional Plan Report, 1934, p. 165.

⁶¹ Kansas State Planning Board: State Parks and Recreational Areas, March 1935, p. 11f.

⁶² Ohio State Planning Board: Preliminary Report on a series of State Planning Studies, Aug. 15, 1934, ch. VII, p. 6.

⁶³ State Planning Board of Indiana: A Report of the Consultants, Feb. 22, 1935, p. 44f.

⁶⁴ Kansas State Planning Board: State Parks and Recreational Areas, March 1935, p. 4.

⁶⁵ Ohio State Planning Board: Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, ch. VII, p. 4.

⁶⁶ Colorado State Planning Board Preliminary Report, August 1934, p. 70.

⁶⁷ Wisconsin State Planning Board: Regional Plan Report, 1934, p. 170f.

⁶⁸ New York State Planning Board: Progress Report, September 1934, ch. IX, p. 14f.

⁶⁹ Kansas State Planning Board: State Parks and Recreational Areas, March 1935, p. 3.

⁷⁰ Pennsylvania State Planning Board: Preliminary Report, December 1934, p. 166.

sued to conditions in the State and to the problems ahead in the field of conservation and recreation.

* * * There are now 4 or 5 State agencies, each operating a variety of areas and sites devoted to conservation and recreation or both. Such a condition is not conducive to a rational development of the State's activities in these fields or to serve the best interest of the public."⁷¹ Several other States have similar difficulties, and their planning boards have proposed the creation of a single department or board charged with supervision of State parks and related matters.⁷²

The Colorado State Planning Board states in its report, "A bill for the creation of an unpaid State park board should be prepared as one of the first steps to be taken in preparing for a State park program."⁷³

National Parks and Forests

The many hundreds of miles of stocked trout streams, thousands of lakes, picnic grounds, camp grounds, variety of wildlife, and other attractions in Colorado National Forests, national parks and monuments provide recreation each year for thousands from the State and elsewhere.⁷⁴

"Probably the largest part of the national forests which should be accessible for automobile travel has already been opened up, and the policy of setting aside primitive areas where there are no roads is highly approved. In these areas are allowed no resorts, summer homes, roads, or commercial enterprises to disturb the natural scene."⁷⁵

Because of the very broad policy of the National Forest Service in regard to recreational service, and with the large areas now in protected forests, these great woods "become the outstanding item in recreation in the State."⁷⁶

In some States, national parks, national forests, and national monuments have not been erected to any considerable extent, although scenic areas with recreational possibilities exist. For example, in Idaho, the State Planning Board "believes that more attention should be given to planning for recreational areas, national parks, and monuments." The Board recommends an investigation of scenic resources, and the reservation of all lands suitable for this purpose.⁷⁷

State Planning Boards in some instances have originated, or assisted in originating various recreational and park projects. A major project of this sort is the

"building of an artificial lake of 270-acres at Ten Sleep Meadows in the Big Horn National Forest on Federal Aid Highway No. 16, and, in conjunction therewith, the construction of a scenic and economic road for a distance of approximately 50 miles from near Arminto, Wyo., thence north along the crest of the Big Horn Mountains to a junction with Federal Aid Highway No. 16 at Ten Sleep Meadows in the National Forest."⁷⁸

The consultants have recommended establishment of a National Forest, as at Table Rock Dam (proposed) in Missouri,⁷⁹ or they may propose extension of boundaries as at Mount Olympus National Monument in Washington.⁸⁰

Within the national parks of the country comprehensive construction and development planning is in progress. National parks in California cover 1,151,000 acres, and for each of these parks "there is being made or has already been made (1) complete topographic surveys as a basis for planning, (2) a master plan of the entire area showing a coordinated scheme of roads, trails, buildings, etc., and (3) detailed plans of the various elements of the master plan. The fact that these plans were available when the program of C. C. C. camps was announced enabled the National Park Service to utilize men assigned to it with the utmost efficiency and economy. The great national parks and monuments of California have not suffered from the unplanned activities of relief labor forces as have many of the parks of cities and counties which have lacked well-studied landscape plans for the direction of labor forces."⁸¹

Recreation on Private and Public Lands

Planning boards have given attention also to the more intensive recreational uses of private and public lands such as summer residence districts, winter sport areas, tourist camps, resorts and tourist hotels, youth camps, roadside parks, yacht harbors, golf links, picnic grounds, "dude" ranches, bathing beaches, public swimming pools, municipal parks and playgrounds, and trails and paths.

Many of these uses have been developed by private enterprise in the past, and should presumably be continued under private initiative. Such a procedure, however, cannot guarantee adequacy of facilities or quality of public service. As a first step, the Connecticut Planning Consultant proposes a thoroughgoing survey of all private recreational facilities. This would not only show the extent and location of existing

⁷¹ Ohio State Planning Board: Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, ch. VII, p. 6.

⁷² Kansas State Planning Board: Progress Report, Sept. 12, 1934, p. 40.

⁷³ Colorado State Planning Board: Preliminary Report, August 1934, p. 70.

⁷⁴ Colorado State Planning Board, Preliminary Report, August 1934, p. 68.

⁷⁵ *Ibid.*

⁷⁶ Preliminary Report of New Mexico State Planning Board, Dec. 15, 1934, p. 158.

⁷⁷ Idaho State Planning Board, Progress Report, December 1934, p. 11.

⁷⁸ Wyoming State Planning Board, Preliminary Report, September 1934.

⁷⁹ Missouri State Planning Board, Preliminary Report, 1934, p. 76.

⁸⁰ Washington State Planning Council, First Biennial Report, Feb. 23, Sept. 30, 1934.

⁸¹ Report of California State Planning Board, 1934, p. 22.

developments, but would also reveal deficiencies and indicate where planned construction may be necessary.⁸²

Certain aspects of recreation have heretofore been left almost entirely in private hands in this country, as for example, the roadside camp and tourist cabin. It is interesting to note that the provincial government controls all such developments in Quebec.⁸³ The Wisconsin State Planning Board accordingly has "proposed to acquire a series of small park areas adjacent to the main trunk highways for use as picnic grounds, for camping, and for rest. Sites now under development are Rocky Arbor and New Glarus. To facilitate this development the regional planning committee through the division highway engineers of the highway commission conducted a survey of possible locations. In 4 reporting highway divisions out of the total of 9 in the State, 130 sites were discovered. Of these, 81 were stated to have added value to the highway division for snow-drift prevention or erosion control, 15 were available for reforestation, 11 were available without purchase by relocation of the highway, and 9 were available by donation from the present owner. With 5 highway divisions still to report, some idea of the available roadside parks is obtainable."⁸⁴ Maine likewise recommends that "public camp grounds be established adjacent to natural recreational areas and contiguous to State highways at definite established distances from each other."⁸⁵

In some instances, public encouragement is needed in order to stimulate private development of recreational facilities. Maine proposes a detailed study of winter-sports areas in that State,⁸⁶ and reports that "a partial study of outdoor bathing facilities has been made", including "a detailed account of the beaches from Kittery to Portland along the coast."⁸⁷ The State Planning Board of Rhode Island submitted, in the P. W. A. inventory, projects for "the development of two State-owned beaches for public uses."⁸⁸

Summer Homes

"Summer-home developments are fast springing up in haphazard fashion around available lake and stream shores. A little forethought and experienced guidance would result in great public benefit. A law enacted in 1933 gives supervisory power to the State health department in relation to water supply and sewage disposal, within subdivisions to be occupied by 10 or

more families, except in cities and except in counties where such subdivisions are controlled by a county health department. Much more is needed, however. Planning control over the entire lay-out is required in order to prevent overcrowding, to safeguard natural beauty, provide roads and paths, and to ensure free community access and enjoyment of the lakes or streams. Most summer-home developments should be complete vacation communities and not merely lot-sale propositions."⁸⁹

Vacation or Resort Areas

"Vacation or resort areas constitute an important natural resource and their proper development should be a matter of public concern. * * * These vacation regions, aside from promoting health, comfort, and enjoyment, constitute an industry of no mean economic importance. Under a system of State planning and zoning these should be quite definitely marked out in order that their special needs may be met by appropriate policies and regulations. They require a different provision of public recreational facilities and possibly special regulations in relation to fish and game and in relation to the use of private property. Regulations tending to preserve scenic beauty, to prevent water pollution, or to insure public rights of access to streams and lakes may be reasonable here, which would be clearly impractical or undesirable in more urbanized or industrialized areas. Everything consistent with other major interests should be done to conserve and enhance the attraction of the region to the vacationist."⁹⁰ From Colorado comes the information that, "In connection with a C. W. A. survey made under direction of the Denver Planning Commission, much information was compiled, by which resorts in the Denver region were classified on the basis of the types of recreation offered. It is planned to obtain such information for the State as a whole, and to prepare a map or a series of maps showing all existing facilities, both private and public."⁹¹

New York calls attention to the fact that "a complete survey should be made of the resort industry", and all activities catering to it, from which "the resort areas or regions should be mapped and a supplemental field survey undertaken to disclose the characteristics and specific planning problems of each."⁹² The New Hampshire State Planning Commission points out that it might well make a study of the possibilities and

⁸² State Planning Board, Report Dec. 15, 1934, p. 12.

⁸³ New England Regional Planning Comm., Progress Report, Oct. 1, 1934, p. 20.

⁸⁴ Wisconsin Regional Plan Report, 1934, p. 172.

⁸⁵ State Planning Board Report, Aug. 20, 1934, p. 141.

⁸⁶ State Planning Board Report, March 1935, p. 5.

⁸⁷ Ibid, pp. 33, 34.

⁸⁸ State Planning Board Report, March 1935, p. 20.

⁸⁹ New York State Planning Board, Progress Report, September 1934, ch. IX, p. 24.

⁹⁰ Ibid, ch. IX, pp. 23, 24.

⁹¹ State Planning Board, Preliminary Report, August 1934, p. 69.

⁹² State Planning Board, Progress Report, September 1934, ch. IX, p. 25.

opportunities for the developing of a system of youth hotels and camps, whereby the young folk may find attractive and comfortable vacation places, with reasonable prices, located easily accessible to trails.⁹³

The Tourist Industry

From a very meager and humble beginning a few decades ago, "tourism" has produced one of the major industries of the country, and one which shows every sign of continued vigorous expansion. The growth of the tourist industry has been largely spontaneous and unplanned. Its sound development from now on would seem to depend upon completion of a rational highway pattern, division of function among the various parts of the country, regional specialization in services performed, and provision of more adequate facilities for tourists in transit. Too often the matter has been viewed competitively, and one locality has sought primarily to attract tourists at the expense of other States. Something of this seems to have been in the mind of the Colorado State Planning Board when it says: "The tourist business in Colorado is a very important industry, bringing an income variously estimated at from 50 to 100 million dollars annually. At the present time this business is concentrated to a considerable degree in the more popular and easily accessible regions of the eastern mountain ranges. With better cross-State roads, it should be possible to distribute this travel more evenly over the State. A better class of accommodations, including better tourist camps, is needed in many of the smaller mountain communities."⁹⁴

Trails

In almost every State there are areas which are and should remain at a distance from improved highways. Such areas, when provided with certain trail equipment, offer very great recreational values to the hiker, the equestrian, or the canoeist. Throughout the country there is a growing demand for trail facilities through hill country and woodland and along streams. New York State has provided just such facilities and

there are now many trails in the Adirondacks, the Catskills, and in the metropolitan district of New York. Vermont possesses the well known Green Mountain Trail, but the most comprehensive project undertaken so far is the Appalachian Trail, which, when completed, will run from New England to the southern end of the Appalachians.

It is suggested by the New York State Planning Board "that there should be a system of trails for recreational use throughout the State. It is possible from a map of New York showing those now in existence to work out a pattern covering as much of the State as might seem feasible. The Adirondacks and Catskills might be connected by trails and the Finger Lakes Region might be brought into the scheme. There is also the possibility of connecting such a trail system with those of neighboring States. It is believed that the use which such a trail system would have by individual and group campers on foot, horse, snowshoe and ski would make it socially worth while. There is, too, the question to be considered of camp sites along the trails."⁹⁵

There are areas in many other States accessible to great numbers of people which lend themselves to trail making. Because of the year-round appeal to tourists of woodland trails, the State Planning Consultant of New Hampshire believes it should foster the development, through planning and coordinative efforts, of an integrated State trail system to be related to similar systems in the adjoining States of Maine, Vermont, and Massachusetts. It also believes that it "might make an investigation of the public interest in the development of bridle paths and of the ways and means of coordinating this activity with other recreational pursuits."⁹⁶

In many States, interlacing streams and low, short portages favor canoe trips. Maine already is surveying and mapping its canoe trails.⁹⁷ To make horse, foot, and canoe trails usable for the public, maps must be readily available. Rhode Island has a map in preparation showing bridle paths and hiking trails.⁹⁸

⁹³ New York State Planning Board Progress Report, September 1934, ch. IX, p. 14.

⁹⁴ State Planning in New Hampshire, p. 77.

⁹⁵ Maine State Planning Board, Report to the National Resources Board, March 1935, Index to Maps.

⁹⁶ Rhode Island State Planning Board, March 1935, p. 16, maps on p. 27.

⁹³ State Planning Commission, "State Planning in New Hampshire", Mar. 15, 1935, p. 77.

⁹⁴ Colorado State Planning Board, Preliminary Report, August 1934, p. 69.

WILDLIFE RESERVATIONS

Methods of Originating

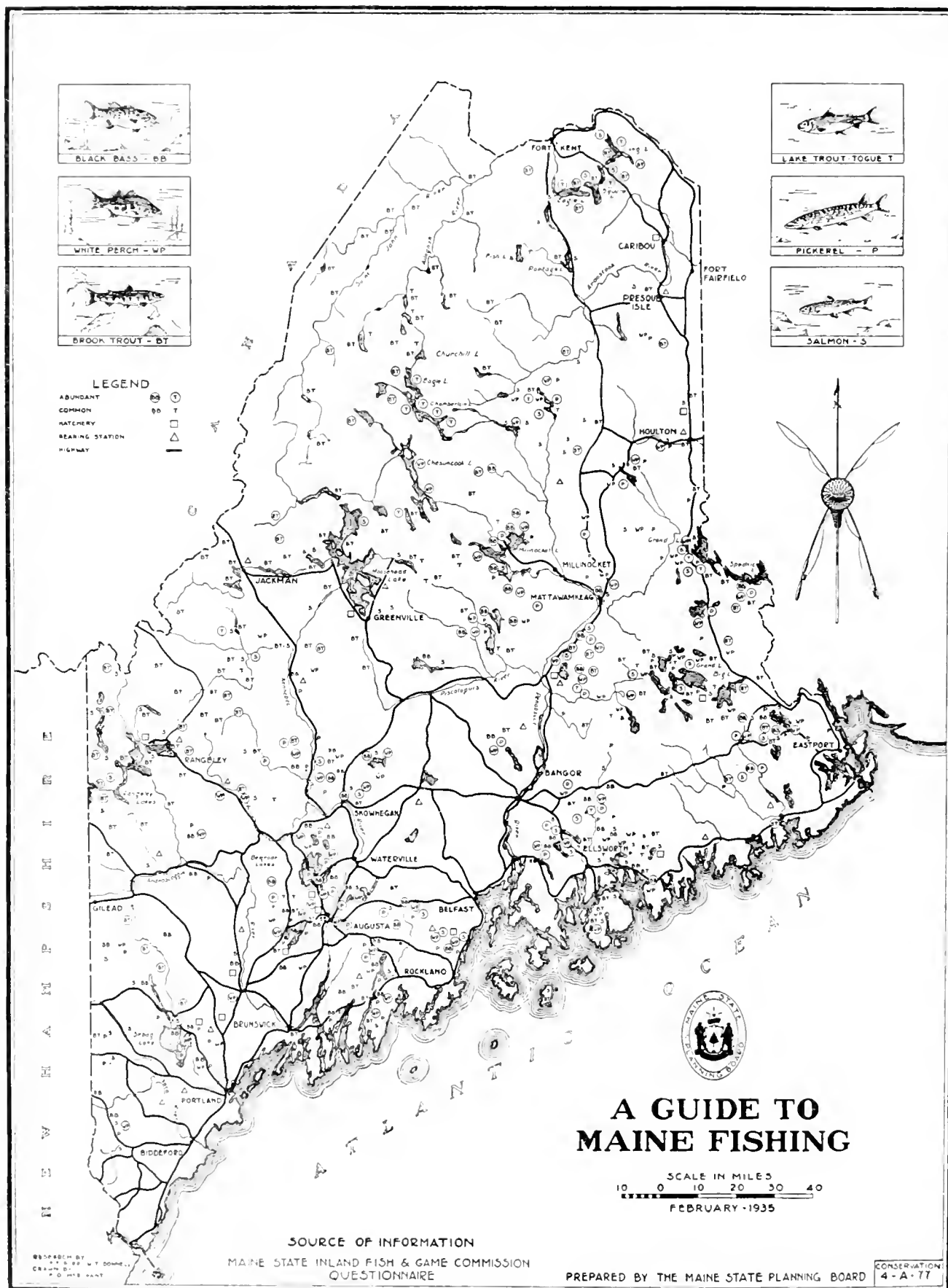
"Forest, wildlife, and recreational areas are in most cases coincident, and a program designed for any one should consider the other two. Assuming that at some future date a broad reforestation program might be put into effect, it should at the same time provide adequate and suitable areas for wildlife protection, hunting and fishing, and other recreational areas."⁹⁹

"Land which would not come under cultivation would be reforested and gradually become a huge natural area capable of supporting much wildlife when stocked with game animals. The same land would also serve as gigantic recreation areas for the benefit of thousands of people."¹

"A large proportion of the submarginal lands gradually acquired by the State could be used for timber pro-

⁹⁹ Report on Land Use Problems, Florida State Planning Board, p. 33.

¹ Indiana State Planning Board, Preliminary Report, 1934, p. 117.



duction, for game and wildlife protection, for watershed protection, and for public recreation."²

The Connecticut Commission of Fish and Game recommends for such areas the establishment of "State game sanctuaries, State leased shooting grounds, State leased streams, and fish hatcheries."³

"Hunting and fishing have somewhat different land needs than the other recreation types discussed so far. They call for 'wide open spaces', yet the public land available for this purpose is at present distinctly limited. More public land will become available as the land-acquisition program goes forward, and this type of land use must be correlated with forest use. However, in the predominantly agricultural areas of the State it will be necessary for privately owned land to be used for these sports."⁴ In order to visualize the wildlife situation some States have prepared maps showing wildlife conservation.⁵ The desirability of administering all the State's conservation program in one department is discussed at some length by the Kansas State Planning Board,⁶ which recommends a survey to determine merits of the proposal.

A biological survey of the waters of the lakes and streams, and of the wilderness areas of the State "would provide a basis for sound development of wildlife,"⁷ and so is recommended by the New Hampshire State Planning Consultant.

"The wildlife subcommittee (of the Oregon State Planning Council) has recommended the allocation of \$20,000 of Federal funds and \$10,000 of State funds each year for a 10-year period to finance the research" into the wildlife resources of the State.⁸ It is believed that public shooting grounds "should be adjacent to a publicly owned or leased game refuge or breeding area which will be the source of stocking, and will insure continuous restocking, even if heavily shot over. This will afford publicly owned areas where, with proper regard for the other fellow, and within reasonable limits of kill allowed, private citizens can enjoy shooting year after year without being required to shoulder the expense of owning and maintaining a private shooting ground."⁹ Also, with private land under public regulations for hunting purposes, capital will be prevented "from appropriating to exclusive use the overflow from publicly owned or leased game refuges or breeding places."⁹

² New York State Planning Board, January 1935, Summary Report of Progress to Gov. Herbert H. Lehman, Principal Recommendations, p. iv.

³ Condensed Report on planning for Connecticut State Planning Board, Second Six Months, p. 22.

⁴ Wisconsin Regional Plan Report, 1934, p. 270.

⁵ South Dakota State Planning Board, Progress Report, Mar. 15, 1935, p. 173, fig. 63.

⁶ Kansas State Planning Board, Progress Report, Sept. 12, 1934, p. 85.

⁷ State Planning in New Hampshire, Mar. 15, 1935, p. 77.

⁸ Oregon State Planning Council, Progress to end of 1935, Research Responsibility, Wild Life Resources.

⁹ Preliminary Report of Oklahoma State Planning Board, Sept. 7, 1934, pp. 53-54.

Hunting and Fishing

The committee of the New York State Planning Board recommends adoption of the following means of assuring adequate places on which to hunt or fish:

1. Mapping the hunting resources of the State, "as a guide for the logical development" of publicly owned hunting lands.

2. "In order to assure the logical development of game resources on publicly owned land, compatible with the other purposes for which this land may be acquired, an opportunity should be given to the division of fish and game to cooperate in the making of the development plans."

3. The purchase of strips of land from 20 to 200 feet wide along streams and lakes, as a means of providing adequate fishing, and, to a lesser extent, hunting opportunities.

4. The leasing of hunting privileges on from 10,000 to 20,000 acres of farm land within a radius of 20 miles of communities aggregating 25,000 or more population, in order to afford some hunting opportunities to the sportsmen of limited income in these communities.

5. The purchase of 25 plots of submarginal farm and brush land each containing from 1,000 to 2,000 acres to be utilized as demonstration areas in the development of refuges and public hunting grounds.

6. The leasing or purchase of at least 50 public areas within the more important available duck-shooting grounds in the State.

7. The development of all available areas of forest land to produce a game as well as a forest crop."¹⁰

The Iowa State Planning Board states as the objectives of its proposed biological survey the following:

1. A critical evaluation of all areas within the State which now have or might have waterfowl or upland game value.

2. The determination of the improved use to which each of the various areas is best suited, regarding not alone its wildlife values, but the adjusted and proper use of lands (or waters) and the coordinated unification of such tracts into a balanced long-time recreational and rehabilitation program.

3. The development of a plan of acquisition, improvement, and perpetuation for these units, which will embody the judicious expenditure of public moneys.

4. The education through demonstration and research of the feasibility of these readjusted uses of natural resources.¹¹

In Wisconsin the salient needs of a game-cropping program are as follows: More research; more emphasis on private lands in demonstrating cropping techniques;

¹⁰ New York State Planning Board. Progress Report, September 1934, ch. IX, pp. 22 and 23.

¹¹ Iowa State Planning Board, Progress Report, September 1934, pp. 92-93.

extension of cropping operations over all suitable range; putting waterfowl on a sustained yield basis; organization of county tax-reversions into "conservation districts"; encouraging private landowners to "earn" their shooting by (a) differential seasons for managed lands, (b) revenue from shooting privileges; subsidizing private lands used for public purposes."¹²

Fish Life Reservations

"The division of fish and game of Indiana has already undertaken a definite long-term program which it considers one of the most important accomplishments of the division during the past year. It is based upon three points: (1) Improvement of the lakes and streams; (2) use of the tested game management methods; (3) creation of public areas for hunting and fishing."¹³ The problem of stream pollution prevails in nearly all Indiana streams to a greater or lesser degree, and it is estimated "that more fish are killed by pollution that will ever be taken by fishermen."¹⁴ Public acquisition of rights-of-way along streams which are stocked is important, and was authorized in 1933, in Colorado, by legislative act. However, "it is believed that some additional means of financing will be necessary other than is provided at the present time."¹⁵ For improving streams and creating conditions favorable for growth and propagation of fish, the Iowa Planning Board has recommended:

(1) "Brush, shelters, and log and rock covers; (2) cross-dams and deflectors * * * to prevent extreme fluctuations in the volume of flow, to eliminate unproductive sluggish mud holes, and to bring about more favorable temperature conditions for the more desirable species of fish; (3) bank retainers * * * to control and minimize bank erosion; (4) planting of trees and grasses * * * to control bank erosion, to insure favorable temperatures, to maintain and increase the food supply, and to add natural beauty."¹⁶

The Pacific Northwest, famous for its salmon industry, faces diverse problems relating to fish in its coastal and inland streams. The planning board there has discovered that the most urgent problems necessitating broad planning are: (1) Prevention of depletion of the fish populations, (2) the building up of the abundance of the present fish populations and the development of new ones through artificial propagation, and restocking, (3) the encouragement of expansion in the utilization of the fish populations that at present are not utilized."¹⁷

¹² Wisconsin Regional Plan Report, 1934, p. 252.

¹³ Indiana State Planning Board, Preliminary Report, 1934, p. 141.

¹⁴ Indiana State Planning Board, Preliminary Report, 1934, p. 142.

¹⁵ Colorado State Planning Board, Preliminary Report, August 1934, p. 77.

¹⁶ Iowa State Planning Board Report, April 1935, pt. II, Water, p. 21, 22.

¹⁷ Pacific Northwest Regional Planning Board, Water Resources and Power Division, December 1934, p. 22.

Other urgent problems facing this area are those of finding a satisfactory and economical "method of passing fish over and around obstructions, methods of preventing harmful stream pollution, and the necessity, cost, and location of possible hatcheries."¹⁸

Waterfowl

A survey of and detailed recommendations on more important waterfowl areas in four major sections of Iowa have been submitted to the United States Bureau of Biological Survey. A preferential schedule was prepared "for acquisition or development of smaller waterfowl areas, as recommended for the State-wide program."¹⁹ In Kansas a survey recently "has been made with the intention of diverting the flood waters of the Arkansas River, Walnut River, and Walnut Creek into the Cheyenne Bottoms for the purpose of creating a waterfowl sanctuary."²⁰

Wild Game

"It is not sufficient merely to protect game by seasons and bag limits. Game supply is dependent upon proper management, the same as forests or agricultural crops, and should be protected, particularly in areas providing ample cover and food supply. Some States have taken active measures to promote game management by individual owners through licensing private preserves."²¹ "There are four known ways in which the public may encourage private game cropping: (1) By developing technique (already discussed), (2) by allowing more liberal shooting privileges to managed lands, (3) by encouraging private landholders to charge for shooting privileges, (4) by subsidizing land uses which have a special public value for game or other purposes."²²

In many States, under conditions existing before settlement and cultivation of the land, large areas existed which were peculiarly adapted to wildlife. One such was "the old Kankakee Marsh, which, before drainage, was a wonderful haven for wildlife. It was a native swamp and marsh wilderness grown up in many species of water-loving trees and grasses. It was famous as a hunter's paradise, being abundant with wild fowl and fur-bearing animals. It was a favorite recreational area and attracted people from all parts of the Nation."²³

¹⁸ Pacific Northwest Regional Planning Board, Water Resources and Power Division, December 1934, p. 83.

¹⁹ Iowa State Planning Board Report, April 1935, pt. I, Land, p. 54.

²⁰ Kansas State Planning Board, Progress Report, Sept. 12, 1934, p. 85.

²¹ Report on Land Use Problems, Florida State Planning Board, p. 33.

²² Wisconsin Regional Plan Report, 1934, pp. 250-251.

²³ Indiana State Planning Board, Preliminary Report, 1934, p. 93.

Public Game Lands

In general, public game lands fall into three classes: (a) Public areas owned for other purposes, but suitable for the incidental production of game, of which national, State, and county forests are examples, and which lie largely in the Forest Belt; (b) public areas acquired especially for game purposes, such as suitable duck breeding and resting grounds, which will be found at various points in the States; (c) tax-reverted lands not suitable for other crops, but suitable for game. Class (c) lands lie largely in the transition belt, between forest and agricultural lands.²⁴

Wild Game on Western Mountains and Ranges

The conditions reported by the Colorado State Planning Board may be considered characteristic of the West. "There is no question that additional range for large game must be provided in conserving and developing the wildlife of Colorado", the report declares. In the mountains within and adjoining the National Forests are ranches and homesteads at high altitudes which are unprofitable, and many such have been abandoned. It is estimated that there are 1,000 such tracts, aggregating 600,000 acres, which should be purchased in any plan to buy submarginal land. A large part of the forests are well adapted to use in summer by deer, elk, and mountain sheep, but a much smaller part is

adapted to the winter range of these species. There is good winter range, most of which is privately owned pasture.

"Additional tracts of foothill and valley land adjoining the higher mountains now used for pasture by cattle and sheep in the spring and fall, are badly needed for spring, fall, and winter range for game animals. In any plan of 'grazing districts' which may be adopted on the public domain, as provided by the recent Taylor bill passed by Congress, there should be provision for the restoration, at least in part, of the former use of these large areas by deer and elk in spring, fall, and winter, and a few deer and antelope for the entire year.

"In the opinion of the Fish and Game Commissioner, there is at present not enough food available to care for more than the present herds of game animals and their normal increase."²⁵ Deer and other animals have disappeared from many forests and "the remedy in the forests having no refuges and which now have few deer, is either to establish more refuges where there is no legal killing, or to provide better law enforcement to keep down poaching. There is now much winter poaching, and deer will not risk the open country unless the season is unusually severe."²⁶ Because of their value in maintaining water supplies, the 40,000 beaver within the National Forests merit consideration. They "are our greatest conservationists."²⁷

²⁴ Colorado State Planning Board, Preliminary Report, August 1934, pp. 81, 82.

²⁵ *Ibid.*, pp. 78, 79.

²⁷ *Ibid.* p. 80.

²⁴ Wisconsin Regional Plan Report, 1934, p. 250.

HISTORIC, SCENIC, AND SCIENTIFIC RESERVES

Places of historic, scenic, and scientific interest are located in every State of the Union, and may include houses and homes of noted people; prehistoric ruins; old forts and Indian pueblos; big springs, lakes, and streams; old trees, wooded areas, and valleys; a village vista or outlook; rock outcrops and peculiar residual or erosional features. Progress of settlement or civilization, thoughtlessness, or absence of information may cause unnecessary destruction of many things which should be preserved. With the advent of widespread motor-car travel, these scenic areas and places having historic associations or scientific interest may bring pleasure and inspiration to thousands. Some such places are known and have been recorded and protected, but many were not even located, and hence have been forever lost; others, in disrepair, have managed to withstand the ravages of time. With a view to preserving such places, many planning boards have recently inventoried them.

The Planning Consultant of Connecticut has made a careful survey of the entire State to locate and describe every place of historic and scenic interest, including scenic highways and beauty spots. The State Forestry Survey cooperated, enlisting the help of expert groups in geology, botany, Indian lore and history.²⁸

All sites of scenic and historic value were located on topographic maps by a selected staff who visited every town. Old houses, attractive vistas, the old village atmosphere of the Common and the elm-shaded streets, attractive spots for picnics, beautiful woods and trees have been mapped for protection, preservation, and public uses.²⁹ In New Hampshire the State Planning Consultant wishes the Commission, insofar as practicable, to assist in the acquisition of such scenic areas as should be in public ownership. They also might give aid to the promotion of local planning and zoning procedure to provide for the protection of lake and stream frontage, highways, buildings of historic and architectural interest, and other local attractions, since in New Hampshire recreation is one of the most important industries to be considered.³⁰

The New York State Planning Board has made a thorough study of work already done by the Division of Lands and Forests. New York has for several years systematically inventoried places of natural beauty and historic interest within its boundaries and as a result

²⁸ Report of the State Planning Board to Gov. Wilbur L. Cross, Connecticut, Dec. 15, 1934, p. 9.

³⁰ State Planning in New Hampshire, Report submitted to State Planning and Development Commission of New Hampshire and National Resources Board, Concord, N. H., Mar. 15, 1935, p. 77.

²⁸ Connecticut State Planning Board, Report of July 12, 1934, by George H. Oray, Planning Consultant, pp. 3-9.

has been a leader in the formulation of constructive policies for the preservation of these places.³¹ Because of their economic and social importance to the people of the State, the New York Board has recommended the continuance of "studies in relation to the preservation of all natural beauty, including roadsides, and preservation of opportunity for public enjoyment of streams, lakes, and shores."³²

The State Planning Board of Michigan has recommended an inventory of Michigan's second largest industry, the tourist industry. In this connection, it also stresses the importance of lake and stream classification; survey of unique geological formations, waterfalls, and primeval stands of timber for the purpose of preserving them as monuments.³³ It recommends a study of the prehistoric copper mines there, with a view to their restoration and opening as historical and educational monuments. It is believed that material related to these, if collected and exhibited in the museum of the Michigan College of Mining and Technology, will aid in interesting tourists in the "Copper Country."³⁴

For Indiana the State Planning Board proposes the establishment of State-owned forested areas along many stream banks, to provide not only excellent recreational facilities but means for the control of erosion and prevention of floods. Establishment of parks is not contemplated, but opportunity to fish and enjoy the out-of-doors would be afforded to thousands.³⁵

Although Iowa is a prairie State of relatively low physical relief, it possesses many places of great scenic beauty and historic interest. The members of the Iowa State Planning Board have been collecting and assembling "all available information on the historic and scenic resources of the State, with a view toward preservation and restoration and proper use by the people."³⁶ They also have rendered a valuable service in "supervising certain unskilled work in excavating ancient village sites and Indian mounds now threatened with destruction." They intend to "propose a program for the preservation and restoration of historic sources. This includes the purchase of land for the restoration of ancient villages and Indian cemeteries, * * * and for the preservation and development of scenic re-

sources * * * making provisions for recreational facilities."³⁷

Contrast in landscape, wealth and variety of scenic and historic resources characterize Missouri. The Missouri Valley, with its tributary streams, the fertile, northern prairies, and the rugged Ozark country possesses many attractions. Through painstaking field and other investigations, the Missouri State Planning Consultant has mapped the location of numerous scenic, scientific, and historic sites, such as natural bridges, big springs, cave and sinks; early churches and old covered bridges, old water mills, forts, battlefields; and homes of notable men. He proposes, among other things, a scenic Ozark Parkway, which will make the beauty spots of the Ozarks accessible to thousands of tourists.³⁸

Kansas, extending for 400 miles westward from the Great Bend of the Missouri and reaching from green humid lands in the east to brown semiarid range on the west, has many places of scenic interest and of historic association. Crossing it are the routes of the Oregon and Santa Fe Trails, over which thousands passed westward to the Pacific coast and the famous Chisholm Trail, route of the great cattle drives across Kansas to the railroad at Kansas City. These and many other routes and places have been located by the Kansas State Planning Board. They believe that "historic buildings, old forts, battlefields, Indian villages, and points of geological and archaeological interest should be studied in detail."³⁹

"In connection with the proposal for shelterbelt tree planting in eastern Colorado", the board there recommends, "consideration should be given to the possibility of tree planting in occasional groves at suitable locations which would be a variation from the shelterbelt strips as planned. Such groves, particularly where highways cross stream beds, could become very attractive roadside parks for the use of travelers."⁴⁰

Wyoming already has developed some of its scenic resources, but much remains to be done. The Wyoming State Planning Board has originated or assisted in various projects, one of major importance being "the building of an artificial lake of 270 acres at Ten Sleep Meadows in the Big Horn National Forest on Federal Aid Highway No. 16, and in conjunction therewith the construction of a scenic and economic road for a distance of approximately 50 miles from near Arminto, Wyo., thence north along the crest of the Big Horn Mountains to a junction with Federal Aid Highway No. 16 at Ten Sleep Meadows in the National

³¹ New York State Planning Board, Miscellaneous Reports: State Parks, Parkways, and Historic Reservations under the supervision of the Conservation Department, Division of Parks; Historic Sites under supervision of Conservation Department, Division of Lands and Forests; Preservation of Natural Beauty and Preservation of Opportunity for Public Enjoyment of Streams, Lakes, and Shores.

³² New York State Planning Board, Staff Reports, O-1, p. 3.

³³ Operations to initiate work of a new sort, State Parks Division, Progress Report by Michigan State Planning Commission, Jan. 11, 1935.

³⁴ Michigan College of Mining and Technology, Research Program, Summary to December 1934, p. 25.

³⁵ Indiana State Planning Board, Preliminary Report, 1934, p. 141.

³⁶ Iowa State Planning Board, Progress Report, September 1934, p. 153.

³⁷ Iowa State Planning Board, Progress Report, September 1934, p. 153.

³⁸ Missouri State Planning Board, Preliminary Report, 1934, p. 56 and map opposite.

³⁹ Kansas State Planning Board, Progress Report, Sept. 12, 1934, pp. 9-17 and 53.

⁴⁰ Colorado State Planning Board, Preliminary Report, August 1934, p. 71.

Forest.”⁴¹ They “have assisted in the preparation and presentation of different municipal park and school recreational projects, including those at Thermopolis, Worland, Buffalo, and Casper. The Casper project is a reproduction of old Fort Casper at the site of original white settlement at this point.”⁴²

In Idaho, after studying the problem, the State Planning Board believes “more attention should be given in Idaho to planning for recreational areas, national parks and monuments. An investigation of our scenic resources should be made, and all lands

suitable for recreational purposes should be reserved for the purpose.”⁴³

New Mexico possesses many Indian pueblos and villages always of interest to the traveler. “Plans are being developed to utilize fully this means of recreation without spoiling them and without unduly disturbing the Indian inhabitants or changing their mode of living.”⁴⁴

⁴¹ Wyoming State Planning Board, Preliminary Report, September 1934.

⁴² Wyoming State Planning Board, Preliminary Report, September 1934.

⁴³ Idaho State Planning Board, Progress Report, December 1934, p. 11.

⁴⁴ New Mexico State Planning Board, Progress Report, Apr. 15, 1935, p. 103.

3. WATER RESOURCES PROBLEMS

Water conservation and planned water utilization have come to be regarded as of prime importance, no less in regions of natural abundance than in regions where perennial scarcity has made the wise utilization of existing resources essential to the preservation of human life. Numerous studies of water resources and problems of utilization have been prosecuted by State Planning Boards, some of which are reviewed here.

For purposes of organizing water problem studies, State reports generally recognized that drainage basins rather than States are the appropriate units. Kansas,¹ Michigan,² New Hampshire,³ and Ohio,⁴ Rhode Island,⁵ and Texas⁶ are among the States whose Planning Boards mapped major drainage basins for the purpose of attacking water problems.

Water resources have been studied in relation to all other kinds of resources. The Wisconsin Regional Planning Board⁷ spoke for many State Planning Boards when it pointed out that a program for the conservation of water resources can be successful only when properly coordinated and interrelated with plans for land use, forestry, health, recreation, game management, agriculture, and soil erosion. Likewise, the different possible uses of water need to be studied together. A reservoir may aid in flood control, irrigation, and navigation; it may produce hydroelectric power and may serve as a recreational area. Sometimes the various needs cannot be served simultaneously. Then, a choice of purposes to be served must be made. The late Frederick H. Newell, former director of the Federal Reclamation Service, listed uses of water in descending order of their importance as follows: (1) Human consumption; (2) production of food (watering stock, irrigation, and fish); (3) disposal of wastes; (4) industry (water power, steam power, and industrial processes); (5) transportation (navigation). To this list the New York State Planning Board⁸ would add a sixth use—recreation. While agreeing that the above priorities are in general correct, taking the country as a whole, each specific body of water or section of a stream is a separate problem and, the relative importance of the water uses may be different.

Water Supply

Urban and rural water supplies for drinking purposes were investigated by many State Planning Boards. The Planning Boards of Maine, Michigan, Minnesota, Ohio, and South Dakota undertook surveys to determine the municipalities which are served by public water supply systems. The Maine⁹ studies were of such significance that a number of communities have called upon the State Planning Board for information and advice on public water supplies. In this State it was discovered that the water supply systems of many communities do not provide adequate fire protection. The Planning Boards of Michigan,¹⁰ Minnesota,¹¹ and Ohio¹² classified municipal water supply systems into two groups: (1) Those obtaining their supplies from surface sources, and (2) those utilizing underground supplies. The South Dakota State Planning Board¹³ found that in 1932 only 61 percent of the 300 incorporated municipalities in the State possessed public water supply facilities and that the critical problems of water supply lay largely in towns of less than 1,000 inhabitants. The Iowa,¹⁴ Wisconsin,¹⁵ and Wyoming¹⁶ State Planning Boards surveyed the sources of public water supply. In this work the Iowa Board secured the cooperation of the State Department of Health and was thus able to increase the accuracy of the results and to avoid duplication of efforts. The Wyoming Board reports that its survey of municipal water supplies has resulted in a project now in course of construction under which two large springs will be utilized to supply the city of Kemmerer with potable water. At present, the city is depending upon water flowing from abandoned coal mines.

The quality of water has been given consideration by some of the boards. The Iowa Board¹⁷ reports that a study is being made of the dissolved mineral content of water throughout the State, while the Planning Board of New York State points out that apparently no systematic investigation of the quality of water has ever been made in New York. The cost of such an investigation for the entire State would be small and the data thus obtained would be of great value.

¹ Kansas State Planning Board. Progress Report, Sept. 12, 1934, p. 134.

² Michigan State Planning Board. Preliminary Report, September 1934, following p. 53.

³ State Planning in New Hampshire, Mar. 15, 1935, following p. 60.

⁴ Preliminary Report (Ohio) State Planning Studies, Aug. 15, 1934, ch. IV., p. 4.

⁵ Rhode Island State Planning Board Report. March 1935, p. 23.

⁶ Texas Planning Board. Preliminary Report, August through January, pt. III, p. 3.

⁷ Wisconsin Regional Plan Report, 1931, p. 183.

⁸ New York State Planning Board, March 1935, Bulletin No. 13, pp. 5 and 6.

⁹ Report of the Maine State Planning Board, Sept. 12, 1934, Mar. 15, 1935, pp. 7, 40.

¹⁰ Michigan State Planning Board, Preliminary Report, September 1934, p. 88.

¹¹ Minnesota State Planning Board, October 1934, pt. II, p. 198.

¹² Ohio State Planning Board. Preliminary Report, State Planning Studies, Aug. 15, 1934, ch. IV, p. 5.

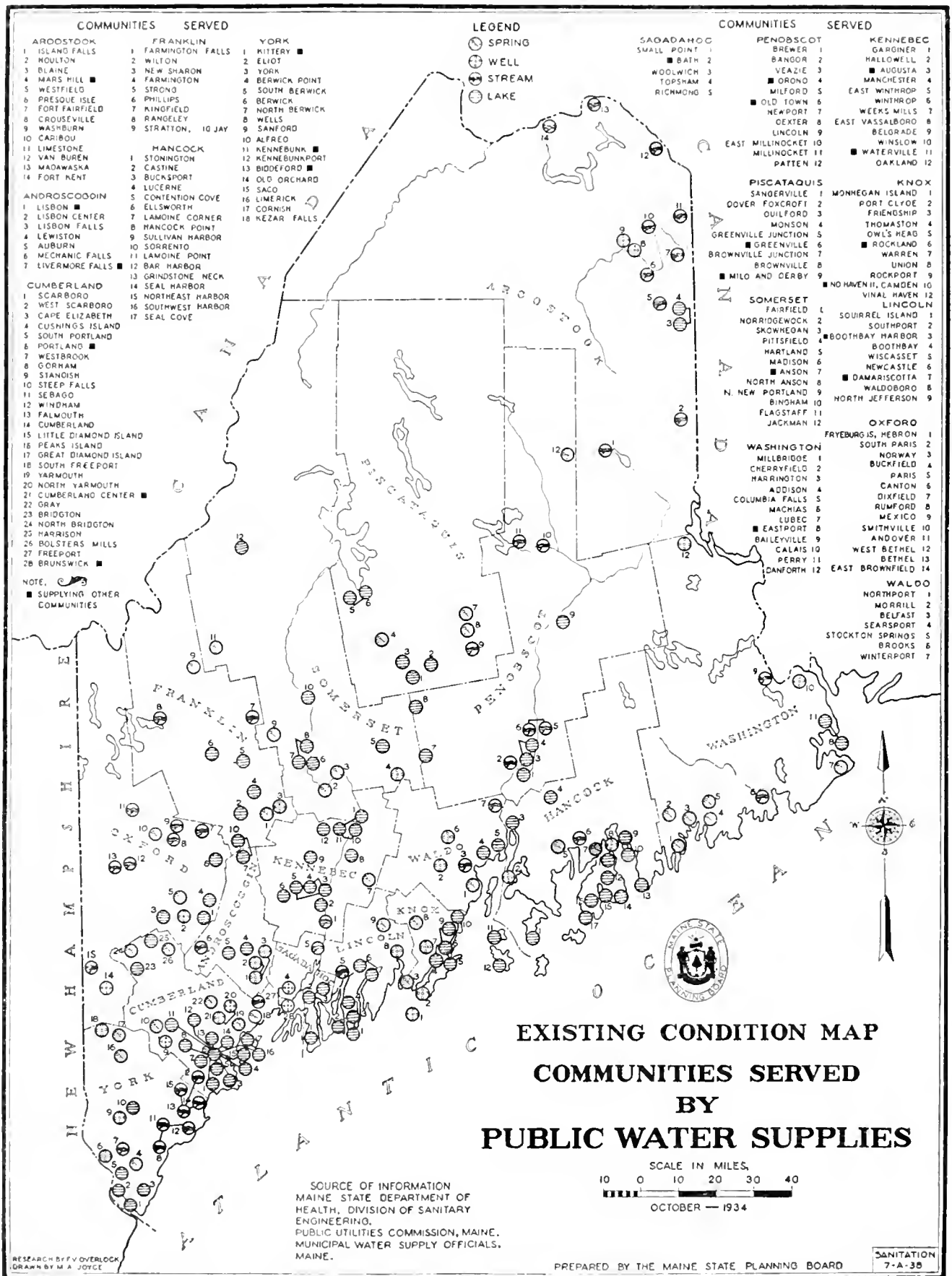
¹³ South Dakota State Planning Board. Progress Report, Mar. 15, 1935, pp. 35-36.

¹⁴ Iowa State Planning Board, Progress Report, September 1934, p. 203.

¹⁵ Wisconsin Regional Plan Report, 1934, p. 149.

¹⁶ Wyoming State Planning Board. Preliminary Report, September 1931.

¹⁷ Iowa State Planning Board. Progress Report, September 1934, pp. 180-182.



Water quality is discussed further, below, under the heading of sanitary protection.

Other water-supply studies include those of the Pennsylvania State Planning Board¹⁸ undertaken to determine the water-supply needs of each community for the next 25 or 50 years, in addition to a determination of the present needs and how they may be met. In South Dakota, the State Planning Board¹⁹ is endeavoring to obtain cooperation of State and Federal geologists and of the United States Department of Agricultural Engineering in making detailed investigations of communities where water shortage is a major problem. When these investigations are completed, the question of whether the maximum benefits will be produced by the construction of small dams or the sinking of deep wells will be answered, and the available public works appropriations can be used effectively. A study of rural water-shortage conditions on 5,000 farmsteads in the State is also being undertaken by the planning board.

Sanitary Protection

The protection of water used for municipal water supplies and recreation is a pressing problem in virtually every State.

Surveys of the purity of municipal water supplies were made by a number of State Planning Boards. The Maine State Planning Board²⁰ had the advantage of chemical, physical, and bacterial analyses of water supplies, made over a period of years by the Sanitary Engineering Division of the Department of Health and Welfare. The planning board was thus able to prepare curves and charts showing the sanitary character of water supplies in Maine since 1923. In Michigan,²¹ the people of 103 municipalities are served water treated in some manner. Seven have softened water, 46 have filtered water, and 50 use supplies which are only sterilized. The Michigan Department of Health has supplied a memorandum of the most needed public water-supply improvements in the State.

The effect of progress in municipal water supply, sanitation, and waste disposal on health is shown in Ohio,²² where a rapid decrease in the water-borne diseases of typhoid fever and dysentery shows a direct correlation with improvements in municipal sanitation.

The quality of many rural water supplies is less satisfactory than that of municipal supplies. In Missouri²³ during 1932 the death rate from typhoid in rural areas

was more than three times that in urban areas. The South Dakota State Planning Board²⁴ points out that Federal investigations of farm water supplies have indicated that approximately 3 out of every 4 shallow wells are badly polluted. The State chemist is preparing for the South Dakota Board a bacterial analysis made by his office. The Wisconsin Board,²⁵ discussing the fact that rural water supplies are often subject to dangerous pollution, recommends that every farm family be encouraged to install running water in the home, with provisions for the safe and convenient disposal of sewage. It further points out that rural health officials should make adequate tests of private water supplies and should advise rural citizens in matters of water supply, sewage disposal, and household sanitation.

Stream Pollution

Stream pollution was reported a serious problem by most of the State Planning Boards. Missouri and the Pacific Northwest regions were exceptions. The Missouri State Planning Board²⁶ reported that as yet pollution is not sufficient to endanger fish life or create a nuisance, but the bacterial content is placing an ever-increasing load on water purification plants in cities depending upon the streams for water supply. The Pacific Northwest Regional Planning Board²⁷ stated that although water pollution is not far advanced in that region and prevention rather than corrective measures are required in general, a number of pollution problems are pressing and should be solved before they are aggravated by new growth and developments and additional contaminating influences.

Stream pollution is dangerous. Water-borne diseases are likely to be spread by the use of contaminated water for domestic purposes or the irrigation of crops²⁸ or for bathing, boating, and fishing or the production of ice supplies which later come into contact with food or drinks that are consumed without being cooked.²⁹ Dairy animals having access to polluted streams present a public health hazard³⁰ for they may easily pick up disease-producing bacteria on their udders and bodies, and these bacteria may be transferred mechanically to the milk during the milking process. It is significant that certain land areas in Colorado³¹ situated between two river valleys and therefore not subjected to the contaminating influence of polluted streams experience

¹⁸ Wisconsin Regional Plan Report, 1934, p. 141.

¹⁹ Missouri State Planning Board, Preliminary Report, 1931, p. 27.

²⁰ Pacific Northwest Regional Planning Board, Problems and Progress, p. 81.

²¹ Colorado State Planning Board, Progress Report, Apr. 20, 1935, Stream Pollution Section.

²² North Dakota State Planning Board, Preliminary Report. Sewage Disposal and Stream Pollution, pp. 6-7.

²³ Iowa State Planning Board, Investigation of Pollution of the Des Moines River, 1928-34, p. 56.

²⁴ Colorado State Planning Board, Progress Report, Apr. 20, 1935, Stream Pollution Section, p. 13.

¹⁸ Pennsylvania State Planning Board Preliminary Report, December 1934, p. 208.

¹⁹ South Dakota State Planning Board. Progress Report, Mar. 15, 1935, p. 34.

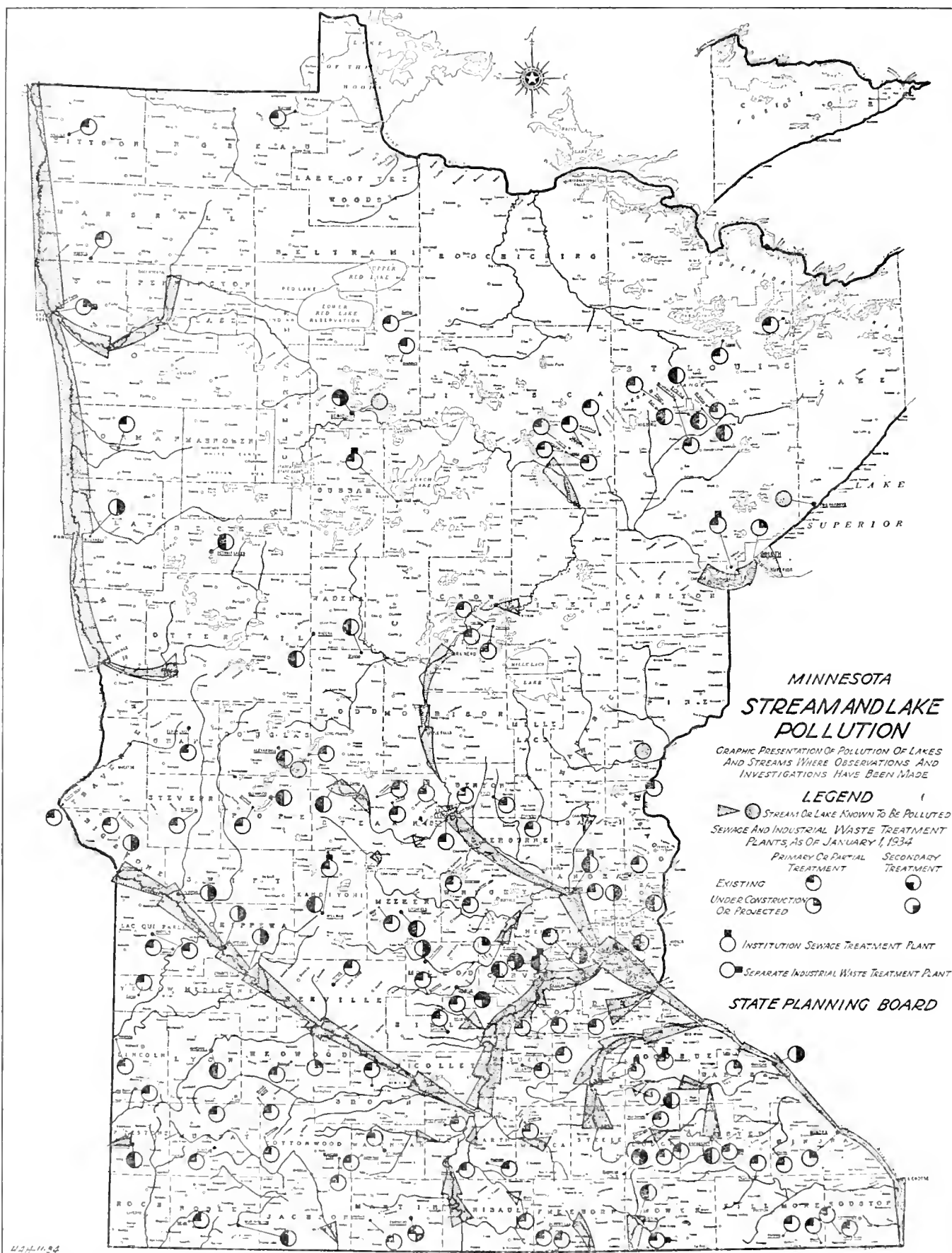
²⁰ Report of the Maine State Planning Board, Sept. 12, 1934, to Mar. 15, 1935, p. 40.

²¹ Michigan State Planning Board. Preliminary Report, September 1934, pp. 83-90.

²² Preliminary Report, (Ohio) State Planning Studies, Aug. 15, 1934, ch. IV, p. 10.

²³ Missouri State Planning Board, Preliminary Report, 1931, p. 47.

²⁴ South Dakota State Planning Board. Progress Report, Mar. 15, 1935, pp. 152-153.



From "Report, Part II, Committee Reports", October 1934.

relatively low death rates from water-borne diseases, showing thereby that stream pollution may justly be recognized as a dangerous menace to life and health.

In addition to being a serious health hazard, stream pollution kills fish and other natural stream life and destroys recreational values.³² The planning reports of Connecticut,³³ New Jersey,³⁴ and Oregon³⁵ have emphasized the destruction of recreational possibilities as a result of stream pollution. In New Jersey, the greatest damage resulting from stream pollution is said to be its interference with recreation. For many miles the streams of the State are so badly polluted that all thought of their recreational use has long since been abandoned. Many more miles of streams, while used for some forms of recreation, are unpleasant and often dangerous. Unfortunately, much of the worst pollution occurs either within or near the more densely populated areas where recreation facilities are most needed.

Among the States whose planning boards advocated or undertook stream-pollution studies are Connecticut,³⁶ Colorado,³⁷ Minnesota,³⁸ Missouri,³⁹ New York,⁴⁰ and North Dakota.⁴¹ The Colorado Board recommended a revision of the laws of the State relating to stream pollution to conform to the laws of other States which have, through the adequacy of the laws and their just enforcement, removed the menace of stream pollution. Because of the custom of establishing garbage and refuse dumps upon the banks of water courses and because such dumps are not only a public nuisance but a source of serious stream pollution as well, the Connecticut State Water Commission investigated, in every municipality with a population of 2,000 or over, the location of dumps and the methods of collecting and disposing of wastes. Since it is usually economically and physically impossible entirely to prevent stream pollution, the North Dakota Planning Board recommended, among other stream-pollution surveys, a study of the natural agencies influencing stream purification and a determination of the amount of pollution that can safely be handled by the streams.

The New England Regional Planning Commission⁴² points out that interstate-stream pollution problems

can be handled only by interstate planning and action. The New York State Planning Board⁴³ suggests that perhaps the pollution of interstate waters should be handled by the Federal Government. The elimination of pollution could then proceed in accordance with a uniform plan with proper allocation of the costs in proportion to the benefits.

Most of the stream pollution results from raw or insufficiently treated domestic sewage and industrial wastes. These two sources of pollution therefore received the special attention of the State Planning Boards.

Sewerage and Sewage Disposal Systems

Practically every State Planning Board has studied sewerage and sewage disposal systems. In Maine⁴⁴ the planning board requested from 100 towns information on existing conditions of sewage disposal. Of the towns replying, 55 percent reported sewerage systems and 45 percent reported no sewerage systems. Many of the towns having no public sewerage system stated that there were many privately owned sewers emptying into streams. As a result of this investigation communities have called on the State Planning Board for advice and information on this subject.

Among the States whose planning reports mention existing sewage disposal systems, in addition to those discussed below, are Missouri,⁴⁵ New Hampshire,⁴⁶ North Dakota,⁴⁷ Rhode Island,⁴⁸ Wisconsin,⁴⁹ and Wyoming.⁵⁰ In Arkansas⁵¹ there exists ample authority to control stream pollution by the installation of the necessary treatment works. The problem is one of securing appropriations large enough to insure the efficient and continuous operation of such works. The Colorado State Planning Board⁵² reports a survey of sewage pollution of streams. Twenty-nine survey stations were established on the streams at the principal cities and towns. At each station three sampling points were established: One at the sewer outfall; one at a point sufficiently upstream to assure samples unaffected by the sewer outfall; and one at a point sufficiently far downstream to assure adequate dilution of the entering sewage with the stream water. It is significant that Denver, the capital of the State, con-

³² Preliminary Report (Ohio), State Planning Studies, Aug. 15, 1934, ch. IV, p. 9.

³³ State Planning Board, Condensed Report on Planning for Connecticut, October 1934, p. 6.

³⁴ New Jersey State Planning Board, Preliminary Report, September, p. 37.

³⁵ Oregon State Planning Board, Six months Progress Report July 1934—January 1935, vol. III, pp. 133-134.

³⁶ Report of the State Planning Board to Governor Wilbur L. Cross, Connecticut, Dec. 15, 1934, pp. 9-10.

³⁷ Colorado State Planning Board, Progress Report, Apr. 20, 1935, Stream Pollution Section, p. 20.

³⁸ Minnesota State Planning Board Report, October 1934, pt. II, p. 41.

³⁹ Missouri State Planning Board, Preliminary Report, 1934, p. 77.

⁴⁰ New York State Planning Board, Summary Report to Governor Herbert H. Lehman, January 1935, p. 59.

⁴¹ North Dakota State Planning Board, Preliminary Report, Sewage Disposal and Stream Pollution, pp. 4-5, 10-11.

⁴² New England Regional Planning Commission, Progress Report, Oct. 1 1934, p. 3.

⁴³ New York State Planning Board, Progress Report, September 1934, ch. VII, pp. 6-7.

⁴⁴ Maine State Planning Board, Report to the National Resources Board, March, 1935, pp. 7, 41.

⁴⁵ Missouri State Planning Board, Preliminary Report, 1934, p. 26.

⁴⁶ State Planning in New Hampshire, Mar. 15, 1935, following p. 60.

⁴⁷ North Dakota State Planning Board, Preliminary Report Sewage Disposal and Stream Pollution, Frontispiece.

⁴⁸ Rhode Island State Planning Board Report, March 1935, pp. 15, 23.

⁴⁹ Wisconsin Regional Plan Report, 1934, pp. 148-54.

⁵⁰ Wyoming State Planning Board, Preliminary Report, 1934.

⁵¹ State Planning for Arkansas, Second Report, March 1935, p. 127.

⁵² Colorado State Planning Board, Progress Report, Apr. 20, 1935, Stream Pollution Section, pp. 13, 20.

taining 28 percent of the total population, has no sewage treatment plant.

The Connecticut State Water Commission⁵³ made a systematic examination of the watersheds of all principal streams and estimates of the volume of sewage, both raw and treated, discharged into each. The Iowa State Planning Board⁵⁴ undertook a survey project to determine the adequacy of existing sewage disposal plants, the need for new plants, their size and type, and the adequacy of sewerage systems. The Kansas State Planning Board⁵⁵ discovered that the sewage of 46 percent of the urban population is returned to the surface water supply either inadequately treated or not treated at all. The board attempted to discover possible uses for treated sewage wastes. In Minnesota,⁵⁶ only 121 of the 256 municipal and 24 large institutional sewerage systems have sewage treatment plants. Sewage handling and treatment for the State of New Jersey⁵⁷ as a whole is said to be clearly inadequate. The sewage from population centers having 8,393,000 people is discharged untreated into the waters of New York State.⁵⁸

Disposal of Industrial Wastes

Stream pollution resulting from the disposal of industrial wastes was studied by the planning boards of Colorado,⁵⁹ Connecticut,⁶⁰ New York,⁶¹ and Ohio.⁶² The New York State Planning Board reported that to stop industrial pollution without serious injury to the industries causing it and therefore without detriment to the local people employed by them requires close cooperation with the industries in studying their waste-disposal problems and in assisting them to develop adequate treatment processes. In some cases, until reasonable methods of treatment are developed, general public interests will be best served by the toleration of some of this pollution. The Ohio State Planning Board reports that the need of preventive and remedial measures in stream pollution has been recognized by the industries of the State and that they have cooperated with the State Department of Health to a surprising degree. Among the groups cooperating are the milk and dairy industry, the canning industry, the byproduct

coke industry and the acid iron waste producers of the steel industry. The Texas State Planning Board⁶³ reports as a particularly difficult problem the disposal of the salt water brought to the earth's surface by the drilling operations of the petroleum industry, and protests against present method of disposal through dilution in streams.

Ground Water

Increasing pollution of surface waters and receding water tables are among the factors which have emphasized the necessity of study of ground-water supplies.

A few States are well along with these studies. Since 1929⁶⁴ there has been conducted and partially completed a survey of the underground water supply of Texas by the State Board of Water Engineers and the United States Geological Survey. A report⁶⁵ on the underground water supplies of Montana, dealing largely with artesian water and representing 5 years of study, has been prepared by Dr. Eugene S. Perry of Montana State School of Mines. Maps showing desirable locations for well-drilling, giving estimates of the depth, and designating areas where wells for stock water or domestic purposes cannot be developed except at extremely high cost, were prepared for a majority of the counties in the drought area. The Montana Relief Commission used these maps in their well-drilling program. Not so fortunate was New Mexico. When the Emergency Relief Administration endeavored to find suitable land to which families might be moved for rehabilitation it discovered that there were many sections in which people might live provided a sufficient supply of underground water were available. Underground water information was lacking in most cases. The New Mexico State Planning Board⁶⁶ has, therefore, suggested that there be created a new Federal office for survey and research work on underground waters, perhaps in conjunction with the Geological Survey and the Bureau of Agricultural Engineering.

The planning boards of Arkansas,⁶⁷ Florida,⁶⁸ Kansas,⁶⁹ Montana,⁷⁰ New York,⁷¹ Oregon,⁷² and Washington⁷³ are among those recommending studies of ground water. The Florida Board recommends a program for the conservation of the State's artesian water supply through the valving of all the wells, the capping of those

⁵³ Report of the State Planning Board to Governor Wilbur L. Cross, Connecticut, Dec. 15, 1934, pp. 9-10.

⁵⁴ Iowa State Planning Board, Progress Report, September 1934, p. 209.

⁵⁵ Kansas State Planning Board, Progress Report, Sept. 12, 1934, p. 132.

⁵⁶ Minnesota State Planning Board, Report, October 1934, pt. II, p. 202.

⁵⁷ New Jersey State Planning Board, Preliminary Report, p. 40.

⁵⁸ New York State Planning Board, Summary Report to Governor Herbert H. Lehman, January 1935, Principal Recommendations.

⁵⁹ Colorado State Planning Board, Progress Report, Apr. 20, 1935, Stream Pollution Section, following p. 21.

⁶⁰ Report of the State Planning Board to Governor Wilbur L. Cross, Connecticut, Dec. 15, 1934, p. 10.

⁶¹ New York State Planning Board, Bulletin No. 5, Mar. 1, 1935, p. 9.

⁶² Preliminary Report (Ohio) State Planning Studies, Aug. 15, 1934, ch. IV, p. 9.

⁶³ Preliminary Report of Texas State Planning Boards. August through January, 1934-35, pt. 1, p. 4.

⁶⁴ Preliminary Report Texas Planning Board. August through January, pt. VI, p. 19.

⁶⁵ Montana State Planning Board Report, Apr. 16, 1935, p. 17.

⁶⁶ Preliminary Report of New Mexico State Planning Board, Dec. 15, 1934, p. 108.

⁶⁷ State Planning of Arkansas, Second Report, March 1935, pp. 140, 146.

⁶⁸ Florida State Planning Board, Report on Water Resources in Florida, pp. 4-5.

⁶⁹ Kansas State Planning Board, Progress Report, Sept. 12, 1934, p. 127.

⁷⁰ Montana State Planning Board, Report, Apr. 16, 1935, p. 17.

⁷¹ New York State Planning Board, Progress Report, September 1934, ch. VII, p. 40.

⁷² Oregon State Planning Board, Six months Progress Report, July 1934-January 1935, vol. III, pp. 44-45.

⁷³ Washington State Planning Council, First Biennial Report, Feb. 23-Sept. 30, 1934, p. 45.

not in use, control of well drilling, and so forth. The Montana Board calls especial attention to the need for additional information on shallow ground-water supplies in order to provide farmers with reliable data on the depth to water, volume and quality of water obtainable, cost of sinking wells, and the possibilities of securing irrigation water from shallow wells. A number of State Planning Boards, including that of Oregon, recommended the establishment of a net of observation wells to observe systematically the fluctuations of ground-water levels, just as rainfall and stream flow are now observed.

Flow Control

Maine is one of the few States in the country which are practically free from disastrous river floods. This enviable situation is attributed by the planning board⁷⁴ to the State's comparative freedom from phenomenally heavy rains, the existence of numerous lakes and storage reservoirs that regulate the flow of streams, the extensive forest areas, and the occurrence of much of the year's precipitation in the form of snow.

Maine's comparative freedom from floods raises the much-argued question of the effect of forest cover on flow control. The Ohio State Planning Board⁷⁵ observes that only very inaccurate records of the rate of deforestation of the State are available, but if these records are of any consequence it would seem that the effect of deforestation in increasing run-off has been greatly overemphasized. History shows that the George Rogers Clark expedition into the Ohio Valley experienced the greatest flood on record for the Ohio Valley, and, within the same decade, a very low stage of stream flow. These phenomena occurred when the Ohio Valley was nearly completely wooded. Run-off records from 1888 to 1925 show an increasing trend of 0.0316 inch per year, which is a slightly greater increase than that of precipitation. It can probably be accounted for by the increase of impervious area resulting from the expansion of urban communities, drainage works, surfaced highways, and so forth. The New York State Conservation Department⁷⁶ is engaged in the reforestation of 1,000,000 acres of marginal land, mostly abandoned farm land. It proposes to select about one dozen small drainage areas in various parts of the State, which have been so purchased and reforested. On each area there will be a gaging station to measure the surface run-off, ground-water wells to determine fluctuations in the water table, rain gages, and other equipment. Continuous records of precipitation, run-off and ground-water levels will be kept during the period of

tree growth, these records being currently compared with those from a nearby control station. The commission hopes that progressive changes in the amount and distribution of run-off on the reforested areas can be detected and that after a period of perhaps 20 years general conclusions can be drawn, and that they will go a long way toward answering the question of how forests affect stream flow.

Economic Studies

Flood damage surveys in various counties of the State were reported by the Washington State Planning Council.⁷⁷ Many boards emphasized the necessity of comparing the costs of flood control with the probable resulting benefits. The Kansas State Planning Board⁷⁸ calls attention to a flood-control plan devised for one section of a river in the State by the United States Army Engineers, a plan which if carried out would largely eliminate local flood damage. The project would cost about \$11,580,000, but since the average annual flood loss does not exceed \$450,000 the plan is not economically justifiable. It has the further disadvantage of not coinciding with comprehensive water-conservation plans. The board points out further that it may frequently be more economic to purchase lands which are subject to overflow than to provide flood protection.

The Connecticut State Planning Consultant⁷⁹ and the Pacific Northwest Regional Planning Board⁸⁰ suggest the possibility of zoning land subject to flooding against uneconomic settlement and improvements in order to lessen flood damage and to do away with the necessity of constructing expensive protection works.

Stream-flow Records

Stream-flow records are essential data in any program of flow control. The establishment of additional gaging stations to measure stream flow was recommended by the State Planning Boards of a number of States including Arkansas,⁸² Florida,⁸³ Kansas,⁸⁴ Minnesota,⁸⁵ New York,⁸⁶ Oregon,⁸⁷ Texas,⁸⁸ and Washington.⁸⁹ The Iowa State Planning Board⁹⁰ points out that

⁷⁷ (Washington) State Planning Council, First Biennial Report, Feb. 23-Sept. 30, 1934, p. 53.

⁷⁸ Kansas State Planning Board, Progress Report, Sept. 12, 1934, pp. 135, 141, 142.

⁷⁹ Connecticut State Planning Board, Condensed Report on Planning for Connecticut, October 1934, p. 6.

⁸⁰ Pacific Northwest Regional Planning Board, Problems and Progress, p. 78.

⁸¹ State Planning for Arkansas, Second Report, March 1935, p. 124.

⁸² Florida State Planning Board, Report on Water Resources in Florida, pp. 5-6.

⁸³ Kansas State Planning Board, Progress Report, Sept. 12, 1934, p. 147.

⁸⁴ Minnesota State Planning Board, Report, October 1934, pt. II, p. 41.

⁸⁵ New York State Planning Board, Progress Report, September 1934, ch. VII, pp. 45, 61.

⁸⁶ Oregon State Planning Board, Six-months Progress Report, July 1934-January 1935, vol. III, p. 7.

⁸⁷ Texas Planning Board, Preliminary Report, August, through January, pt. VI, p. 25.

⁸⁸ Washington State Planning Council, First Biennial Report, Feb. 23, Sept. 30, 1934, pp. 44-45.

⁸⁹ Iowa State Planning Board, Progress Report, September 1934, pp. 187, 189.

⁷⁴ Report of the Maine State Planning Board, Sept. 12, 1934, to Mar. 15, 1935.

⁷⁵ Preliminary Report (Ohio), State Planning Studies, Aug. 15, 1934, ch. IV, p. 3.

⁷⁶ New York State Planning Board, Progress Report, September 1934, ch. VII, p. 48.

since floods are primarily caused by heavy rainfall it is logical that stream flow studies be connected with rainfall studies. The planning boards of Florida⁹¹ and New York⁹² recommend the establishment of additional stations to secure precipitation data. The Florida Board points out that the present location of rainfall stations does not make possible the accurate determination of mean precipitation over the various watersheds of the State. Recording rainfall gages should be installed at critical locations in order to determine intensity of precipitation as well as total amount during a 24-hour period.

Cooperative Action Essential

Flood control is seldom a purely local or even single-State problem. The Pacific Northwest Regional Planning Board⁹³ and the Washington State Planning Council⁹⁴ recognized it as a problem on which Federal, State, and local governments must cooperate. In Idaho⁹⁵ a three-county planning district organization in cooperation with mining companies and with public utilities serving the territory is making a preliminary study of a major flood-control problem which is regional and interstate in character. The Kansas State Planning Board⁹⁶ recommends a coordinating authority to work out a unified flood control plan for each watershed.

Irrigation

The possibility of irrigation developments, occasionally as independent projects but more often in connection with proposals for flood control, hydroelectric power developments, and other types of water utilization received the attention of State Planning Boards in the western half of the country.

Among the irrigation recommendations of the Oregon State Planning Board⁹⁷ were the following: (1) Utilization and control of the water resources of Willamette River Valley for irrigation combined with flood control, improvement of navigation, prevention of erosion and stream pollution, and improvement of conditions for fish life; (2) classification of lands to prevent the waste of water on submarginal lands, and (3) the construction of storage reservoirs to conserve water for lands now being irrigated, but not to bring new

lands under cultivation. The South Dakota Board⁹⁸ advocates combining irrigation projects with those for flood control and power development but believes that irrigation and navigation projects cannot usually be successfully combined due to conflicts of interest during periods of low-water flow. In Montana,⁹⁹ irrigation development along three major lines was recommended: (1) Supplemental storage for inadequately irrigated areas; (2) new irrigated areas for the relocation of farm families; (3) small irrigated areas interspersed through the range areas to balance winter feed with grass resources. Colorado,¹ Idaho,² and Washington³ are other States whose planning boards considered irrigation problems.

Miscellaneous Water Conservation Proposals

The possibility of increasing recreational resources through the foresighted planning of water projects intended primarily for some other purpose or solely for recreation has not been overlooked. North Dakota, New York, and Wisconsin are among the States whose planning boards advocated protection and improvement of the recreational lakes. The North Dakota Board⁴ urges that inasmuch as the State possesses few lakes, every natural lake in the State and especially those which are surrounded by forest vegetation be given public protection at the earliest possible moment. The New York State Planning Board⁵ considers it important that the public's opportunities for access to rivers, lakes, and the seashore (now limited) be conserved and increased. The Wisconsin Planning Board⁶ recommends studies of water-level control, weed growth, algae, and general pollution of the recreational lakes of the State.

Possible diversion of water from one river basin to another,⁷ conservation and protection of the mineral springs which constitute one of Arkansas' valuable resources,⁸ protection of the water levels in Lake Tahoe,¹⁰ and the creation of a fresh-water lake separated from the Great Salt Lake by dikes¹¹ are special problems reported by State Planning Boards.

⁹⁸ South Dakota State Planning Board, Progress Report, pp. 42-43.

⁹⁹ Montana State Planning Board Report, Apr. 16, 1935, p. 14.

¹ Colorado State Planning Board, Progress Report, Apr. 20, 1935, Water Conservation, p. 1.

² Idaho State Planning Board, Progress Report, December 1934, exhibit K, p. 6.

³ Washington State Planning Council, First Biennial Report, Feb. 23-Sept. 30, 1934, p. 8.

⁴ North Dakota State Planning Board, Preliminary Report—Land Utilization.

⁵ New York State Planning Board, Summary Report to Gov. Herbert H. Lehman, January 1935, Principal Recommendations.

⁶ Wisconsin Regional Plan Report, 1934, p. 183.

⁷ Colorado State Planning Board, Progress Report, Apr. 20, 1935, Water Section, p. 4.

⁸ Minnesota State Planning Board Report, October 1934, pt. II, p. 53.

⁹ Preliminary Report of Arkansas State Planning Board, Sept. 10, 1934, p. 56.

¹⁰ California State Planning Board, Report, 1934, pp. 65-66.

¹¹ A State Plan for Utah, Progress Report, Apr. 15, 1935, p. 138.

⁹¹ Florida State Planning Board, Report on Water Resources in Florida, p. 6.

⁹² New York State Planning Board, Summary Report to Governor Herbert H. Lehman, January 1935, p. 61.

⁹³ Pacific Northwest Regional Planning Board Progress Report, January 1935, vol. 3, appendix D, pp. 1-2.

⁹⁴ Washington State Planning Council, First Biennial Report, Feb. 23-Sept. 30, 1934, p. 51.

⁹⁵ Idaho State Planning Board, Progress Report, December 1934, p. 4.

⁹⁶ Kansas State Planning Board, Progress Report, Sept. 12, 1934, p. 144.

⁹⁷ Oregon State Planning Board, Six Months' Progress Report, July 1934-January 1935, vol. III, p. 72.

The Florida State Planning Board¹² recommends that the State empower an existing State agency or through legislative action create and establish a State Water Authority to which shall be entrusted the centralized responsibility of—

1. The investigation and collection of basic data on the water resources of the State. Data on water resources cannot be obtained overnight nor in a few months of intensive investigation, nor even in a year or two; 10, 15, or 20 years of record may be necessary before reasonably safe conclusions may be drawn. The only way to obtain records of this length is to commence now; waiting several years only postpones the time when adequate data are available. In the meantime, golden opportunities to obtain critical information on floods or drought may slip by.

2. The control over use of State waters.

3. The authority to cooperate with the State board of health in all matters relating to the drilling of wells for the purposes of disposing of or controlling surface waters or sewage wastes, and in controlling or regulating sanitary conditions when lakes or other bodies of water are drained naturally through sinks.

4. Entering into cooperative agreements with the Federal Government on any investigation or project involving State or Federal interest.

5. Reviewing and passing on any plans or designs for structures utilizing or operating on the waterways of the State with the purpose of protecting public interest.

¹² Florida State Planning Board. Report on Water Resources of Florida, pp. 3-4.

4. ELECTRIC POWER PROBLEMS

From a modest beginning in 1882, the supplying of electricity in the United States has become a major industry, employing a quarter million workers and representing an investment estimated to be more than twelve billion dollars.

Electricity has become a vital part of our domestic and social lives. The home has enjoyed the inestimable advantage of adequate lighting, domestic service aids, air conditioning, entertainment, and communication. A high degree of flexibility has been given to industrial processes by the application of light, heat, chemical activity and motive power. The increased mobility of energy has removed many of the previous restrictions on plant location and layout and the design and control of machinery and processes. Electricity must be given no small part of the credit for having made possible the amazing increase in the man-hour production of manufacturing enterprises, and the substantial reduction in the hours of labor and the physical burdens of laborers.

Wise planning of power resources requires coordination with other factors of regional planning. In fact, water resources developments are frequently made financially possible only by sale of the power which often can and should be generated as part of the total project. Too often, however, dams are built for stream control, without provision for power production, despite the fact that sufficient head and flow of water are available and a future market for the power is in view. High-voltage transmission of energy, as an alternative to local generation utilizing fuel supplied by common and contract carriers, brings power planning into the field of transportation planning. Thus, for their mutual refinement and for the benefit of the total plan of national resources, each factor must be developed with reference to all others.

Planning Board Reports on Power

Many of the State planning boards have already reported on studies of the power situation in their States, and others are working on the subject but have not yet completed their reports. The Minnesota State Planning Board, for instance, reports as follows:

"The economic and social welfare of a community or region will be affected materially by the availability of adequate quantities of electricity at low cost. Improved economies in the transmission of electricity

and in the utilization of fuel for generation of power, promise to remove the handicap of areas without adequate water-power resources. The remaining undeveloped water power in Minnesota is located in the areas considered best suited to forest use in the northern part of the State. This water power may aid in the development of small urban areas supported by forest industries and tourist trade. An electric power plan is needed for Minnesota, which will promote the best unified use of all resources, * * * and which will promote adequate provision of present and future power needs of the State."¹

The same State Planning Board proposed the interconnection of the isolated municipal generating plants and transmission lines in that State, so that they might enjoy some of the economies which the commercial plants have effected. They also proposed that municipal plants be permitted to supply contiguous rural areas.²

"Quite a number of opportunities exist (in Missouri) for the development of power dams and lakes as in the case of the Lake of the Ozarks," says the Missouri State Planning Board. "Projects of this character are beneficial in agricultural areas in that the availability of cheap power in large volume should invite local industrial development and generally provide opportunity for improved standards of living for the residents of agricultural areas."³ The board also points out in the same report that the development of power would make possible the development of the chemical industry, using locally available minerals.⁴

The State Planning Board of Arkansas reports that "There has been a tremendous growth in the use of electrical power in Arkansas during the last 20 years. The use of electricity in homes has doubled in the last 10 years. The use of electrical appliances, lights, radios, refrigerators, and air conditioning units is increasing daily. To forecast the actual demand for electricity is impossible but an intelligent guess will indicate the tremendous requirements of years to come. A most casual study of power resources will reveal almost unlimited opportunities. Both fuel and water power developments are dependent on water supply."⁵

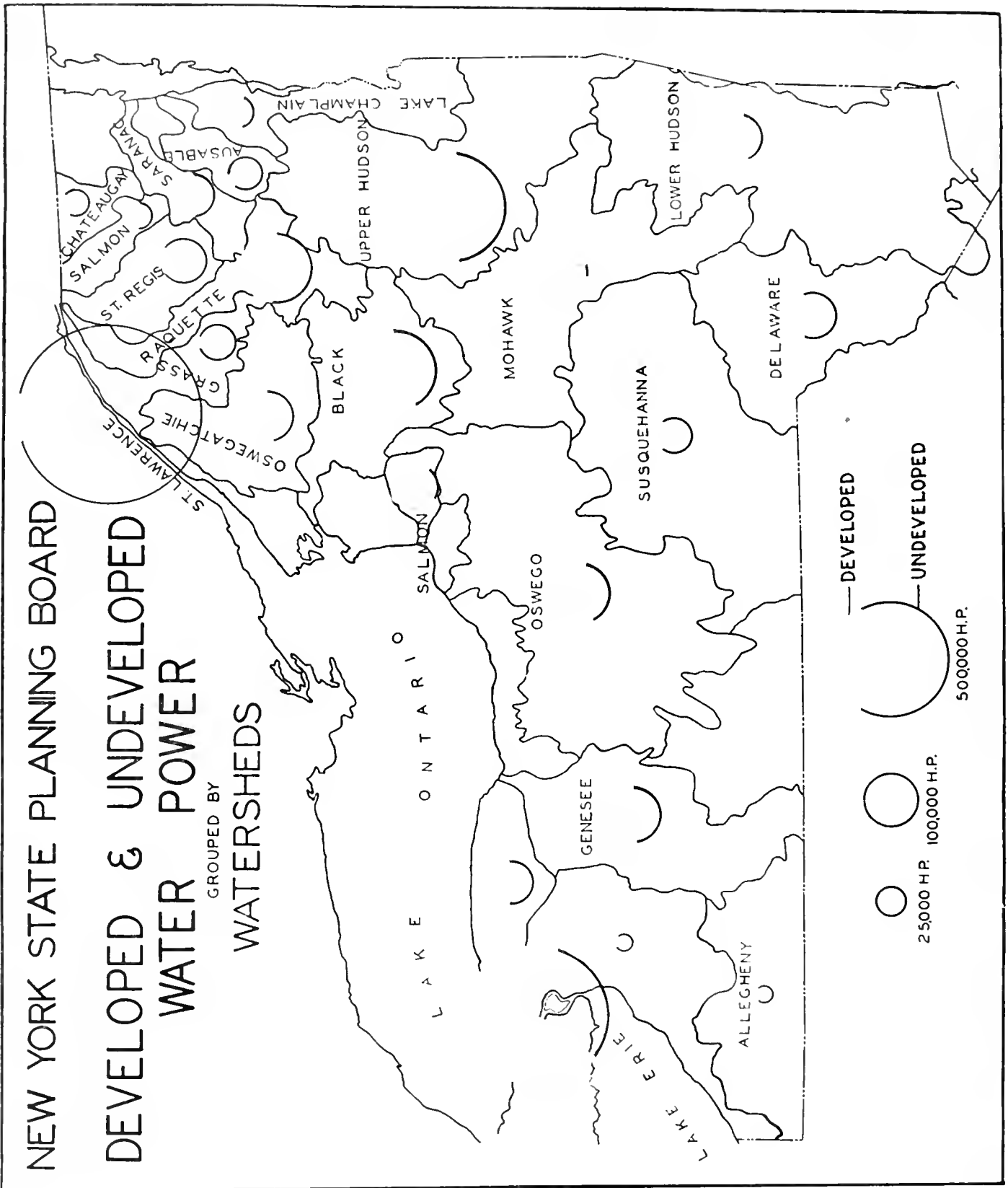
¹ Minnesota State Planning Board, Report, October 1934 pt. 11, p. 94.

² Ibid Report, November 1934, pt. 1, p. 20.

³ Missouri State Planning Board, Preliminary Report, 1934, p. 15.

⁴ Ibid., p. 76.

⁵ Arkansas State Planning Board, Preliminary Report, Sept. 10, 1934, p. 61.



This report contains a number of tables and charts giving the effect of amount of power used, and time at which it is used, upon the rate per kilowatt-hour. The probable increase in demand is estimated, and suggestions made as to the source of future power. Studies show that modern large steam plants in the State are generating current more cheaply than the average hydroelectric plants.

The map entitled "Super power", in the Preliminary Report of the Indiana State Planning Board shows the location of super power transmission lines (33,000-66,000 and 132,000 volts) in Indiana. It also shows the location of class A and B power plants, and indicates a wide distribution of such plants, and transmission lines.⁶ A similar description of electrical distribution systems in Kentucky is described by the State Planning Consultant of that State.⁷

The Ohio State Planning Board prepared a map showing the principal electric transmission lines and generating stations in the State. "An examination of the map will show the great variety of voltages used. It is quite apparent that closer cooperation between operating companies is necessary in order that this great variation be cut to about three classifications, so that equipment can be standardized and interchange in emergencies facilitated."⁸

The Regional Planning Committee of Wisconsin says: "There can be no doubt as to the social value accruing from a condition where all families are equipped for, and can afford to use, all the electricity reasonable required in the maintenance of a generally prevailing high standard of living."⁹ The committee also asks the question:

"Would it be advisable for the State's electrical utilities to be tied together into one operating company, either publicly or privately owned, and thus lower costs and more readily serve the needs of the citizens of the State?" While not answering the question, it goes on to say: "The advisability and practicability of the establishment of publicly owned power districts is a subject needing much more research and study than has been available for this report. It is for State planning through cooperation of interested State departments to determine the degree to which a coordinated service may be attained, to survey and appraise the power potentialities of the several sections of the State, to stimulate and devise methods whereby electric power may be made more extensively available to all areas likely to be intensively developed for agricultural or industrial use, and to try to determine

those steps essential to cheap and extensive electric service."¹⁰

The State Planning Board of Iowa believes that the continued economic development of the State is to a large measure dependent upon the availability and use of a cheap source of power to run its factories, operate its machinery, and light its homes. If the average Iowa housewife is to be relieved of much of the unnecessary drudgery about the home, power must be available for home equipment at low rates, and the cost of such appliances must be brought within the range of the average purse. It is not enough to make these things available merely to the urban dweller; cheap power must be made available to Iowa's greatest industry—farming, and to the farm housewife.¹¹

In commenting on the history of the development of electrical service, this same planning board says:

"This widespread distribution of electrical power has been no small factor in Iowa's industrial development, and there can be no question about the part it will play in future industrial expansion. Likewise the fact that 99.9 percent of our urban population have had electrical service available, has been a contributing factor in raising the Iowa standard of living."¹²

In a later report, the Iowa State Planning Commission says:

"The present generating and transmission equipment is of sufficient capacity to serve the State with adequate and dependable electric service for some years, unless an abnormal increase in consumption takes place. (Fig. 103, p. 182, map of urban electric service showing primary and secondary transmission lines, generators and convertor stations, communities and incorporated towns served, and incorporated towns not served.) * * * Studies show that less than 10 percent of the municipal generating plants are operating at plant capacity factors of over 20 percent. In the case of the large utility systems only the central stations have favorable output ratios and the many auxiliary plants are operating only during the peak loads or on special occasions * * *. This excess capacity, where it exists, is causing additional production costs in the form of higher fixed charges and lower operating efficiency due to poor loading."¹³

A study was made of the methods used in financing the municipal plants and systems in present operation. The results of this study show that 52 are financed and paid for by taxation, 10 are financed jointly by taxation and earnings, 2 are financed by local contributions, 1 was a gift to the city, 19 are financed by earnings, 18 were indefinite (in a number of cases

⁶ Indiana State Planning Board, Preliminary Report, 1934, vol. I, p. 36.

⁷ Kentucky State Planning Board, Preliminary Report, September 1934, ch. V, p. 22.

⁸ Ohio State Planning Board, Preliminary Report, Aug. 15, 1934, ch. V, p. 20.

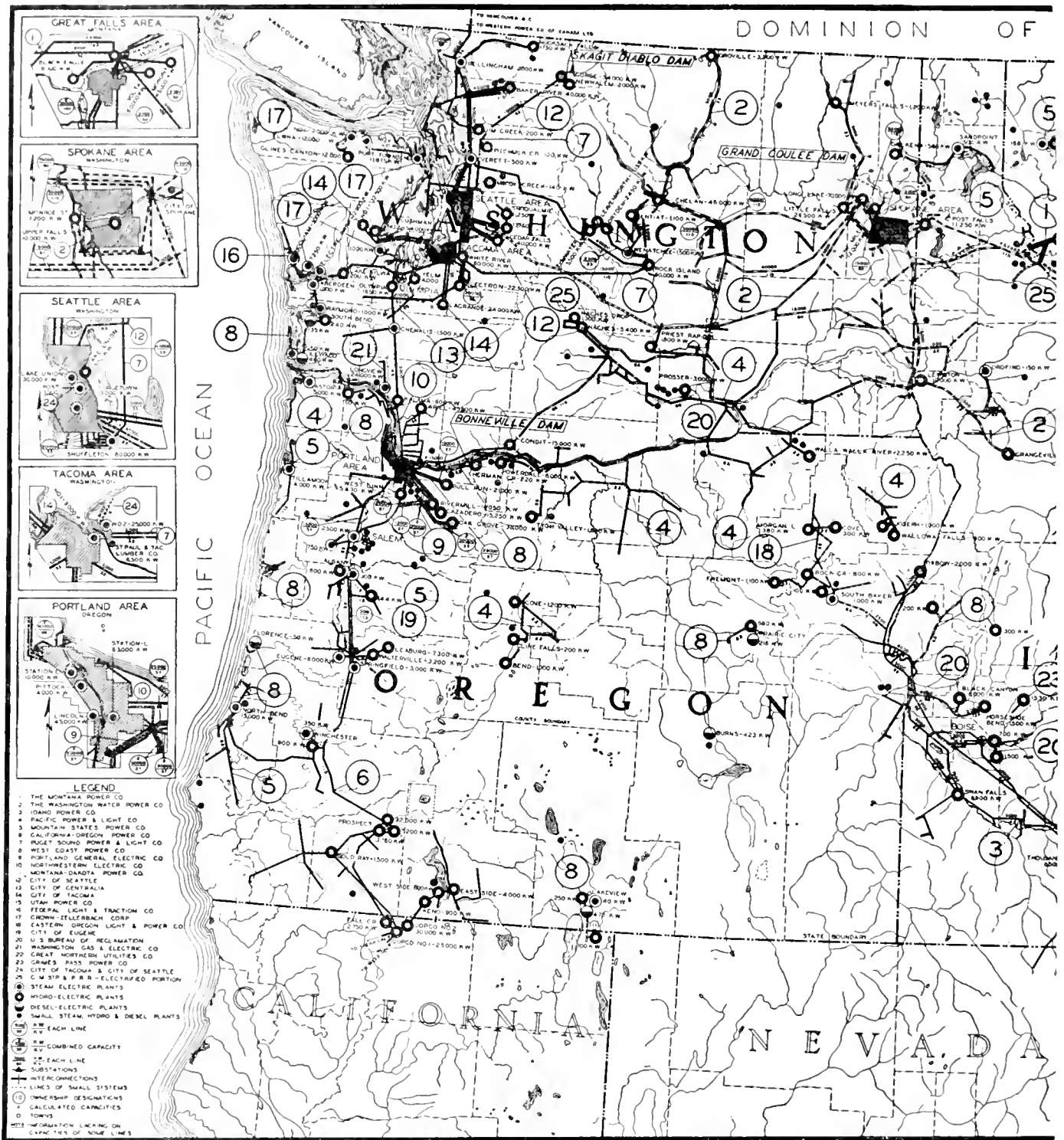
⁹ Wisconsin Regional Planning Committee, Regional Plan Report, 1934, p. 334.

¹⁰ *Ibid.*, p. 335.

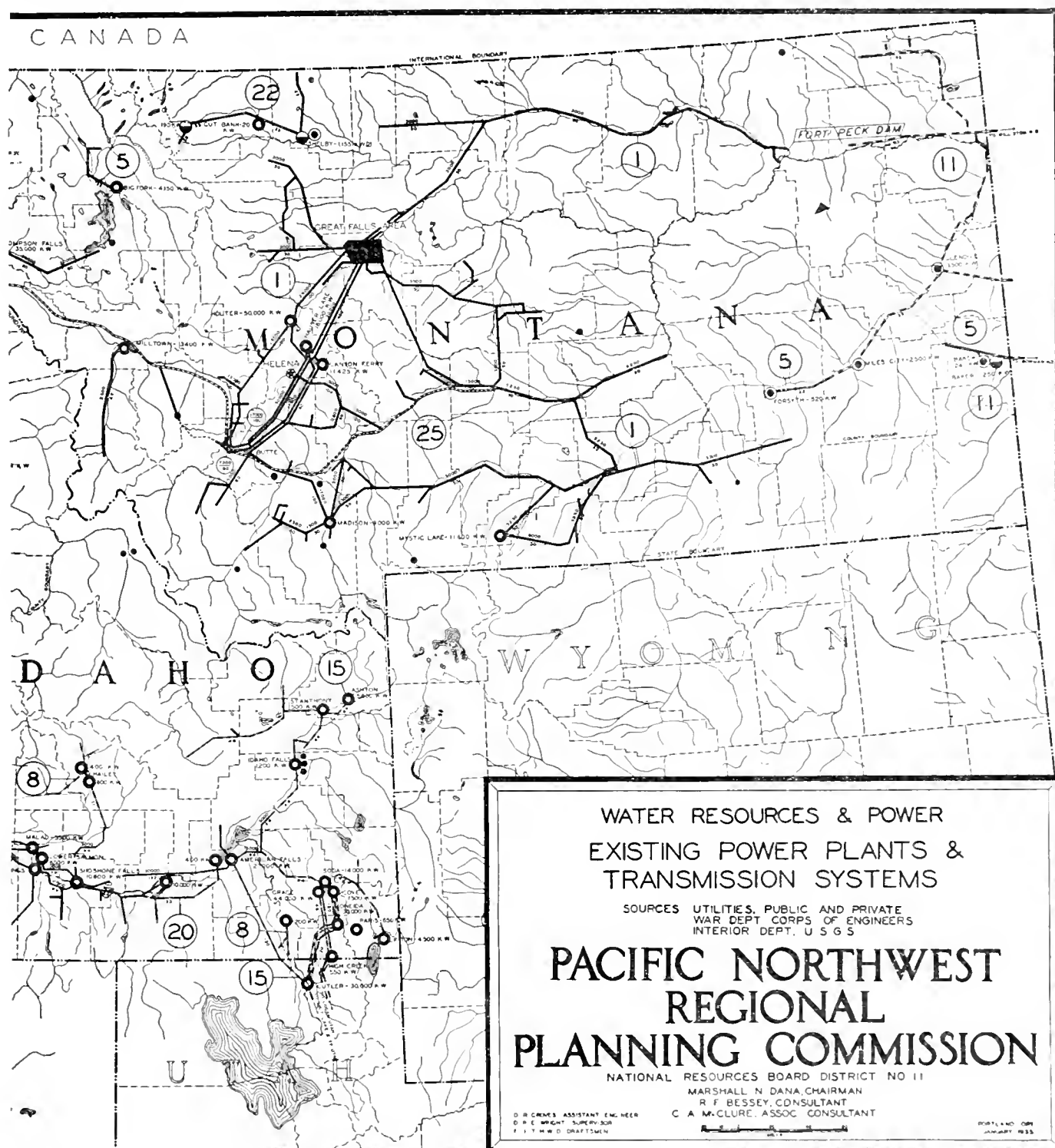
¹¹ Iowa State Planning Board, Progress Report, September 1934, p. 455.

¹² Iowa State Planning Board, Progress Report, September 1934, p. 456.

¹³ *Ibid.* The Second Report, April 1935, pp. 180-192.



From "Consultant's Report"—January 1934—January 1935.





From "Report of the Maine State Planning Board," Mar. 15, 1935.

general obligation bonds were issued). Under a law which went into effect several years ago, all the new municipal plants must be financed out of earnings. Most interest rates on municipal securities are between 4 and 5½ percent. Regarding this subject, the State Planning Board says: "Every municipal plant is a law unto itself; there is no regulation from without to compel the municipality to make an annual balance sheet, produce a certain percent of profit, or provide for the future by depreciation accountancy. There is no cooperation between municipalities for the purpose of solving common problems."¹⁴

"Several rather definite conclusions can be drawn from the (research) material thus far collected", say the State Planning Board of Iowa, "but much work remains to be done along this line. The study of the existing rural electric rates shows a chaotic condition in this field and much need for some regulatory board to standardize as nearly as possible the rates and policies for the entire State. * * * Such a body would be available as a board of arbitration where rural consumers could secure a hearing on any complaints as to unjust rates or contracts. The decision of such a board, whether it upheld the questioned rate or declared it unjust, would tend to restore confidence. At present * * * ill feeling has developed between the utility and the consumer."¹⁵

In Colorado the periodic run-off of the streams makes satisfactory hydroelectric development impossible, except where water is stored for other purposes. Some large irrigation projects are contemplated, which will offer opportunity for the development of power.¹⁶ In Idaho this same combination of uses is now practiced and extensions are contemplated. The requirements of water for stock, irrigation, and domestic supply have precedence over power. Power developments may help to finance the storage of water for the other purposes. The Idaho Planning Board was also concerned over the export of power out of the State, and made a special survey of the subject.¹⁷

The Texas State Planning Board says: "The delay in hydroelectric development is probably due to the limited demand for this type of power. Texas has an abundance of cheap fuel; lignite, natural gas, and petroleum. * * * However, hydroelectric power development has made a beginning in Texas. * * * There are many opportunities * * * along the spring-fed, perennial streams which rise in the Edwards Plateau of southwest Texas."¹⁸

The State Planning Board of New Mexico has found only three feasible locations for the development of

hydroelectric power on a large scale: The Gila River, The Elephant Butte Dam, and the White Rock Canyon.¹⁹

Large Scale Power Projects

On account of the construction of the Bonneville and Grand Coulee Dams in the Northwest, power takes a very large place in the planning studies of the Pacific Northwest region. In fact, it is not an exaggeration to say that in this region, the planning is centered around these two hydroelectric power plants.

"The major problem confronting the area is the disposal of this large block of surplus and new power and every effort should be made to bring about such absorption in the shortest possible time." The following lines of action are recommended:

1. Continued study of ways and means of expanding the existing domestic and rural markets, including the use of electricity for house heating.

2. The dissemination of official and accurate information as to the advantages of the Pacific Northwest to businessmen throughout the Nation interested in cheap power, including offers of all possible inducements in the nature of attractive sites, cheap transportation, and low taxes.

3. Detailed surveys as to location, extent, and quality of the natural resources of the region and its tributary area.

4. Research work to develop new commercial methods for use of electric power in the development of the natural resources of the region and its tributary area.²⁰

The Oregon State Planning Board gives the following list of possible outlets for Bonneville power:

- (a) Increasing present per capita consumption of electric power throughout the State.

- (b) Possible new industries which might use large quantities of power.

- (c) Development of natural resources through processes which will absorb large blocks of power, such as timber byproducts, cellulose, cellophane, pulp processed, etc.

- (d) Discovery of new electro-chemical and electro-metallurgical processes.

- (e) Possible electrification of railroads or portions thereof.

- (f) Pumping of water by electric power for irrigation purposes (particularly in eastern Oregon and in the Willamette Valley).

- (g) Electric heating for business buildings (also residences) at times of off-peak load.²¹

¹⁴ Ibid. The Second Report, April 1935, p. 183.

¹⁵ Ibid., p. 191.

¹⁶ Colorado State Planning Board, Preliminary Report, August 1934, p. 165.

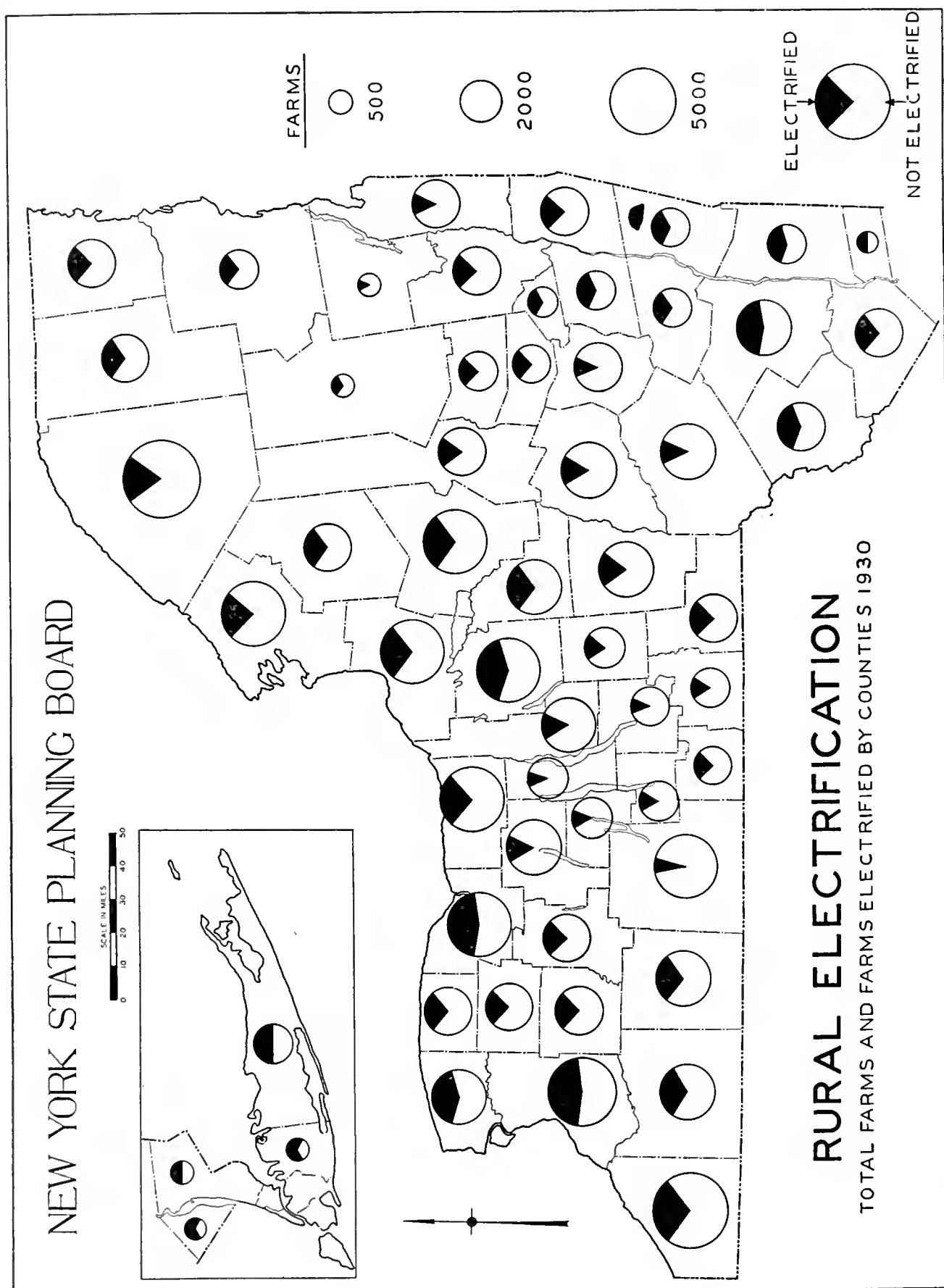
¹⁷ Idaho State Planning Board, Progress Report, December 1934. Exhibit G.

¹⁸ Texas State Planning Board, Six Months' Report, January 1935, pt. IV, p. 15.

¹⁹ New Mexico State Planning Board, Progress Report, Apr. 15, 1935, pp. 73-100.

²⁰ Pacific Northwest Regional Planning Commission, Report, Water Resources and Power Division, December 1934, pp. 81-82.

²¹ Oregon State Planning Board, Six Months Progress Report, January 1934, vol. III, pp. 148-149.



From "Progress Report on the Making of a State Plan for New York," Sept. 1, 1934.

The Washington State Planning Council suggests the advantages of a well-planned State power system, as follows: "The State is quite well supplied with power transmission lines, but a greater coordination of our generating and distributing systems is required. Also the extension of transmission lines through rural communities is a subject for future study. The effect of the development of large blocks of power and their transmission through a coordinated super power system may mean decided decentralization of industry so that industry and agriculture may be more directly supplemental. Such a movement will have a bearing on expansion of our highway and rail systems."²²

A special bulletin of the engineering experiment station of the University of Washington, prepared at the request of the State Planning Council, compares the low dam at Grand Coulee, now under construction as a P. W. A. project, with five other designs of dams for the same site. It finds that the low dam will not regulate stream flow to any appreciable extent, and will not increase the "firm power" at lower power plants, aid navigation, or provide water for irrigation in the Columbia Valley.

The high dam, the report claims, would do all these things. The increase in power is estimated as 90 percent at the Bonneville Dam and 580 percent at the Grand Coulee itself. It is also claimed that the high dam would prevent floods and that the low dam would not. The high dam would permit reclamation of 1,400,000 acres of fertile land, with a large population which might provide a market for some of the additional power produced.²³

In connection with the Boulder Dam project "Some very pertinent facts have been brought out in regard to power in Utah. The building of the Boulder Dam with its great source of power may become a serious matter to the Salt Lake industrial district." Measures to offset this competition are found in several sections of the Utah State Planning Board report.²⁴

And in the opposite corner of the country the Maine State Planning Board attempted to bring together all the available information on the run-off of the streams of the State, and started a determination of the power available for future development. Only about half of the available water power in the State has been developed. It is also true that the existing power plants are used only to about 50 percent of their capacity.²⁵

On December 4, 1934, the Governor of Maine requested the State Planning Board to prepare a

report for the Passamaquoddy Hydroelectric Commission for use on January 4, 1935. This would have been impossible except for the results of extensive research and investigation brought together during the first 6 months of the board's existence. The report contained about 250 pages, with maps, diagrams, and supporting data on the natural resources of Maine.²⁶

In February, a 32-page digest of the complete report was prepared as one of the information bulletins issued by this planning board, dealing principally with possible markets for power, such as electric reduction of metal ores, the manufacture of fertilizer, with nitrogen derived from the air, and the manufacture of liquid chlorine. Large quantities of chlorine would be required in the manufacture of pulp and paper which could be made to advantage in this region as soon as power is available since a permanent supply of suitable wood appears to be at hand for this product. It was found that the earning from aluminum, stainless steel, and nitrogen plants would permit retiring the original investment in 30 years. An examination of the social values of the project showed 18,000 unemployed registered with the National Reemployment Service in the six counties nearest to Eastport, the site of the project.

Water-power development in New York State illustrates the entire history of the subject in this country, and the account given by the State Planning Board is sufficiently interesting to justify quotation.

"Prior to about 1900, mechanical water power was developed at the most accessible and feasible sites and the power was used at the site. In more recent years the trend has been to construct hydroelectric plants of large size on the main rivers and to abandon many little plants on small streams. Even more recently these large plants have been combined into systems and the systems have been interconnected.

"The principal steam and hydroelectric power-producing centers in New York State are grouped around New York City, Buffalo, Niagara, Albany, Rochester, and Utica, with Binghamton and Jamestown on the southern border and Massena on the north. * * * Steam-generated power in New York City is about equal to all of the combined steam and water power in the rest of the State."²⁷

"In approaching the problem (of State planning for power development) it should be recognized that the St. Lawrence project is one of four great regional developments which include the Tennessee Valley project

²² Washington State Planning Council, Preliminary Report on Transportation, Nov. 23, 1934, p. 3.

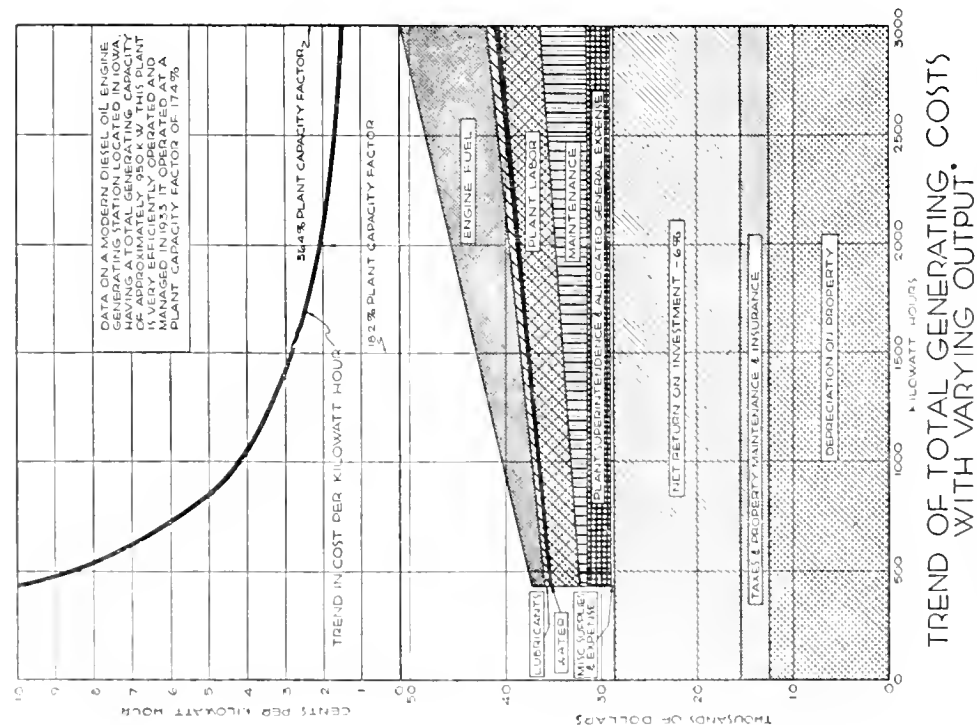
²³ Hydroelectric Power in Washington, Bulletin No. 78, Engineering Experiment Station, University of Washington, by Carl Edward Magnusson.

²⁴ A State Plan for Utah, Progress Report, Apr. 15, 1935, p. 12.

²⁵ Maine State Planning Board, Report of Three Months, Period, Aug. 20, 1934, p. 174.

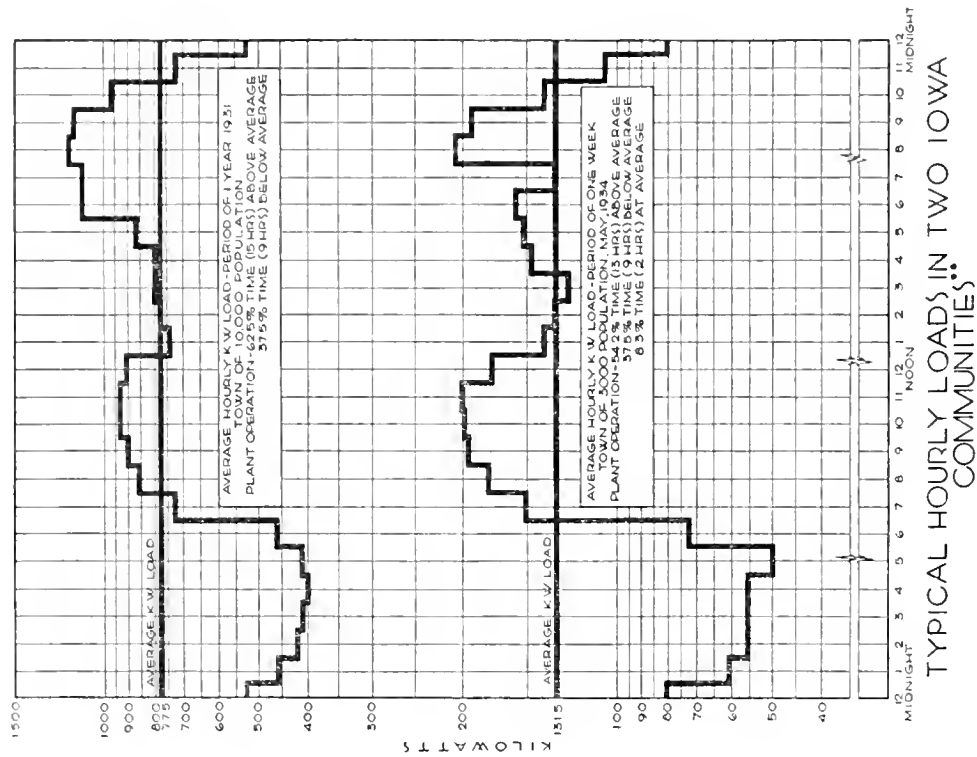
²⁶ Ibid, Report, Mar. 15, 1935, p. 8.

²⁷ New York State Planning Board, Report, September 1934, ch. VIII, p. 1. (Illustrations: Water-wheel distribution, 1873, following ch. VIII, p. 17 (lettering changed), and Power Producing Centers, third following ch. VIII, p. 17, Ibid., Progress Report, Sept. 1, 1934.)

TREND OF TOTAL GENERATING COSTS
WITH VARYING OUTPUT.

NOTES

• THIS CURVE WAS PREPARED TO ILLUSTRATE THE TREND OF TOTAL GENERATING COSTS PER KILOWATT HOUR IN AN IOWA DIESEL ENGINE GENERATING STATION OF APPROXIMATELY 950 K.W. CAPACITY IN AN ATTEMPT TO CORRELATE THE COSTS OF ALL PLANTS OPERATING IN IOWA. THE PLANT CAPACITY FACTOR OF OVER 25% IS ACTUALLY OCCUR.

TYPICAL HOURLY LOADS IN TWO IOWA
COMMUNITIES

PREPARED BY
THE COMMITTEE ON
PUBLIC SERVICE
PROJECT
1051

IOWA STATE PLANNING BOARD

TOTAL ELECTRIC GENERATING COST AND KILOWATT DEMAND CURVES

in the southeast, Boulder Dam in the southwest, and the Columbia River development in the northwest. The formulation of plans for the Federal projects embraces the use of water resources for every socially desirable purpose; that is, not only for hydroelectric power, but also for such other purposes as irrigation, flood control, navigation, etc. Further, these plans embrace broad social and economic objectives benefiting agriculture and stabilizing employment. The plans under way and the work already done in connection with these coordinate Federal projects should be reviewed in working out a plan for assuring the people of New York State the same advantages from their great power resources as will accrue to the other sections of the country from the developments included in the Federal program."²⁸

Regarding the production and use of power, the Pennsylvania State Planning Board says: "Of the 12,000,000,000 kilowatt hours generated within the State, * * * approximately 63 percent was generated by central stations owned by public utility companies or municipalities, and the remainder, or approximately 37 percent was generated within the plant where it was consumed." It is probable that a larger proportion of the total power consumed in Pennsylvania is produced within the plant where it is consumed, than in most other States. The study of electric-power resources naturally centers around central-station installations.²⁹

Rural Electrification

Rural electrification occupies a prominent position in many of the State planning reports. Most of the States agreed with Indiana that future agricultural developments and especially the creation of farm industries, depends to a large extent upon the availability of adequate electric facilities. Another object of rural electrification is to give the farm home the advantage of the same labor-saving devices that have lightened the work of the city housewife to such a great extent in the last few years and made city homes much more healthful and attractive. Electric refrigeration, air conditioning, and even electric heating, have been considered, along with lighting, cooking, washing, ironing, other household equipment, and the necessary radio which not only furnishes entertainment, but informs the farmer of current market conditions.³⁰

In Connecticut, the State Planning Consultant reports that the State Agricultural College and the United States Department of Agriculture cooperated with him

in the survey of rural electrical facilities.³¹ He says: "This was part of a national project, proposed and organized by the United States Department of Agriculture. Twenty counties scattered over the country were chosen. For Connecticut, Tolland County was selected. The State college supervised the study. The Public Utilities Commission and the power company serving the area gave excellent cooperation. Complete data on present lines and service were obtained and also an estimate of potential consumption."³²

The Indiana State Planning Board says that "While at the present time many farms throughout the State use electricity for lighting and other purposes, farm industries have not been developed to any great extent. The adjustments of population to relieve unemployment require available electric power over a wide system of distribution." A few short extensions from the excellent distribution system which the State already has would easily serve the entire area.³³

The data collected in surveys of 10 representative Iowa counties bring to light certain facts regarding the present situation in rural electric service and the possibilities of extending this service to additional rural consumers.³⁴ The Iowa State Planning Board also made a study of 15 years' records of 1 farmer-owned and operated electric company where it was found that the cost of energy used in some cases averaged as much as 80 cents per kilowatt-hour throughout a whole year, while in others, using the current more liberally, the cost averaged as low as 6 cents per kilowatt-hour.³⁵

The research work done by this State Planning Board shows that "while a few public utilities have spent considerable time and money in an effort to develop a profitable rural load, the farmers themselves have been the real pioneers in Iowa rural electrification. Most of the early lines surveyed have been built and operated by groups of farmers. Rural electrification has increased very rapidly in Iowa under adverse farm conditions and with very little encouragement or help from electric utilities in recent years."

"Further research is necessary to work out the cheapest and most efficient methods of rural electric distribution, and of equitable rates based on such methods. New methods of wiring must be studied to see if the cost can be cut. * * * Farm uses of electric power will be separated according to primary and secondary importance, and these two classifications applied in detail to typical dairy, livestock,

²⁸ Connecticut State Planning Board, Condensed Report on Planning For Connecticut, Oct. 9, 1934, p. 3.

²⁹ Ibid., Report to Governor Wilbur L. Cross, Dec. 15, 1934, p. 9-10.

³⁰ Indiana State Planning Board, Preliminary Report, 1934, vol. 1, p. 35.

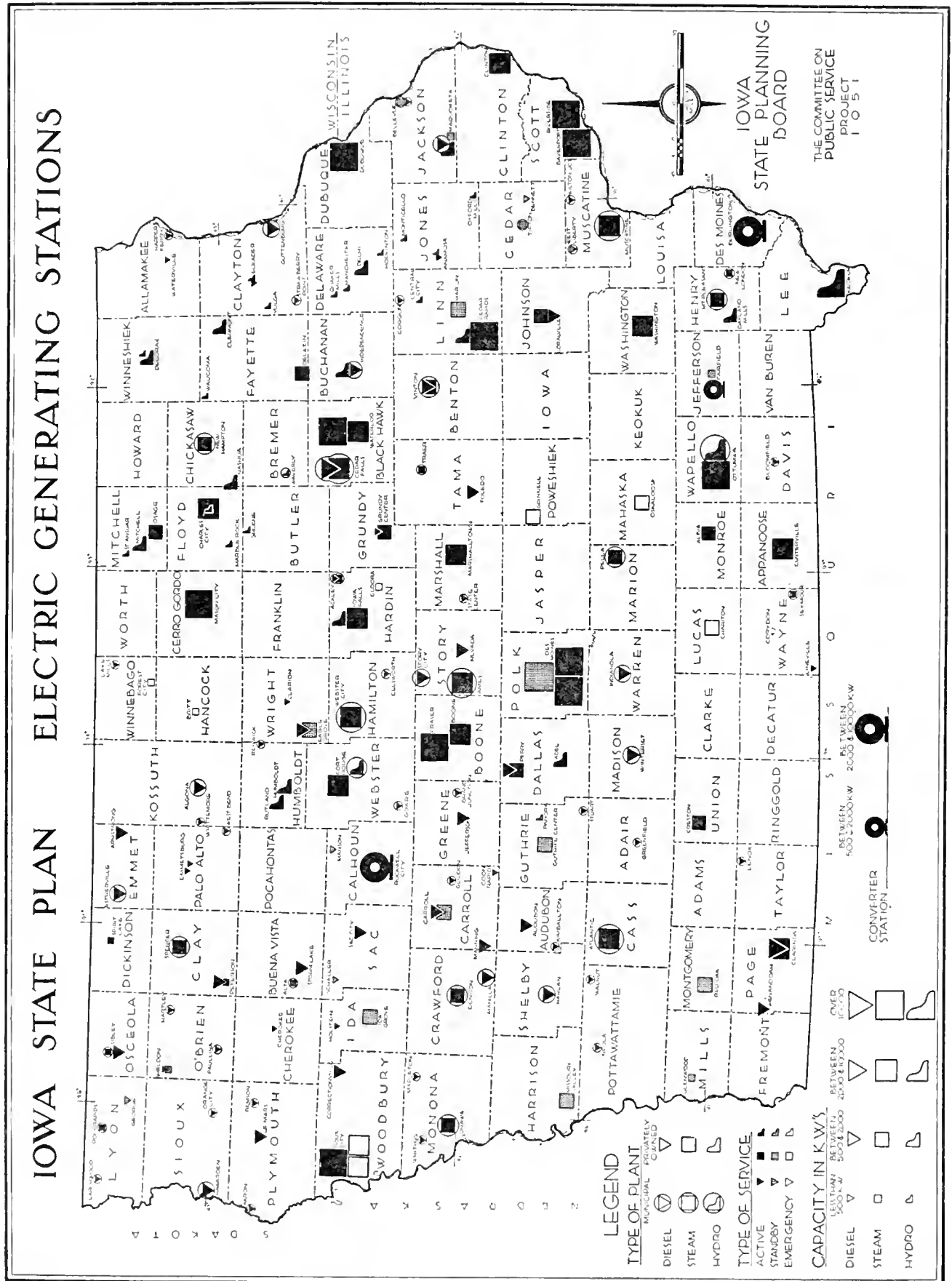
³¹ Iowa State Planning Board, Second Report, April 1935, p. 188.

³² Ibid., Second Report, April 1935, p. 191.

²⁸ Ibid., ch. VIII, p. 5.

²⁹ Pennsylvania State Planning Board, Preliminary Report, December 1934, p. 515.

³⁰ Indiana State Planning Board, Preliminary Report, 1934, vol. 1, p. 35.



cash, grain, diversified or general, poultry, and other types of farms to determine the cost of electric power per unit of production and to show the economy and convenience of electric power. Data will be prepared covering the newer uses of rural electric power, such as household and dairy refrigeration, combating insect pests, soil heating and sterilization, electric stimulation of plant and animal growth, and so on.

"The field data as to the feasibility of rural line extensions will be analyzed to determine the factors governing such extensions and the proper weighting of each size and type of farm and other rural consumer."³⁶

The Minnesota State Planning Board describes experiments conducted for a period of years in Red Wing which show the possibilities of increasing production and should serve as a guide in future installations. The indications are that rural electrification can be made self-liquidating.³⁷ Reports show that "About half as many farms are connected with central station service in Minnesota as the average proportion in the United States; 88 percent of Minnesota farms are without electricity. Rural electrification is of vital importance to the future welfare of Minnesota." Five percent of Minnesota farms are connected with central station power, and an additional 6.7 percent have independent plants.³⁸

The State Planning Board recommended that "a study be made of the feasibility of promoting rural electrification by the construction of the distribution lines as a work-relief project, and if found practicable, to develop a plan of procedure, including needed legislation."

"On April 5, 1935, the office survey of 30 counties had been completed. This survey showed a total of 44,727 farms not served with electricity which would require approximately 11,000 miles of new line to make connections with all these farms. Tabulations of population and financial data of these counties are well under way. These data will be used to make the first elimination from the survey of those areas which are clearly unable to support the type of electrification service contemplated."³⁹

The Montana State Planning Board finds trends toward a more favorable condition for rural electrification, as the following statement will show: "If the relocation of stranded families and expansion of rural population is to follow the stream valleys in Montana where irrigation is possible, there will gradually develop

more thickly populated communities and a program for rural electrification will be possible providing the costs of transmission lines and operating expenses can be met. At least two county planning boards are already studying rural electrification possibilities and there are other irrigated valleys where this program can be started now. This will supply power not only for farm homes but for pumping for irrigation and drainage."⁴⁰

"In making a plan for electrification for this State", says the State Planning Board of New Mexico, "it is necessary for present development to give large consideration to the character of the people and their economic standing. In many localities where there is sufficient population, such as in the northern portion of the State, the people are, as a rule, rather poor and live the same primitive life that was the custom when the country was first settled. * * * It is possible that rural power would be a success after a period of time, with development of markets for produce, and an education of the inhabitants to the uses of electricity * * *, but until the change could be made any rural service would be very questionable as to its financial success."⁴¹

To complete the map of transmission and high tension distribution lines in Ohio, field surveys were made in 400 townships. The privately owned companies were requested to provide maps of their rural distribution lines. The F. E. R. A. work division managers were asked to obtain similar information from publicly and cooperatively owned utilities in their respective counties. All these data were studied and areas selected where rural electric distribution lines might be practical.⁴²

The State Planning Board of Pennsylvania says: "There is need of a comprehensive study of power distribution and the cost to consumers in the State. Such a survey should be similar to that recently completed by the Power Authority of the State of New York. Any such study should be made with a view to the possibility of lowering the cost of power to the domestic consumer and an extension of rural electrification. It also should include development of the State's coal resources as a source of base power, as well as development of water power sites. The possibility of coordinating both sources and their interconnection also should be considered."⁴³

"Since hydroelectric developments on the Missouri River are rather doubtful, it appears", to the South Dakota State Planning Board, "that rural electrifica-

³⁶ Ibid., Progress Report, September 1934, p. 486.

³⁷ Supplemental Report, pt. 3, p. 22.

³⁸ Minnesota State Planning Board, *ibid.*, pt. 3, p. 94.

³⁹ Ibid., pt. 3, p. 24.

⁴⁰ Montana State Planning Board Report, Apr. 16, 1935, pp. 20 and 21.

⁴¹ New Mexico State Planning Board, Progress Report, Apr. 15, 1935, p. 99.

⁴² Ohio State Planning Board, Progress Report, March 1935, p. 270.

⁴³ Pennsylvania State Planning Board, Preliminary Report, December 1934, p. 540.

tion development must be undertaken by cooperation with present public utility companies.”⁴⁴

The rural electric survey made in Vermont, is described as follows by the State Planning Report: “The objects of the survey are twofold. First: To find out what use is made on farms of various sizes and to see

how much this use has increased over a 5-year period. Second, based on data of present users, to see if a market exists on those farms not now served by electricity that justifies the extension of present distribution lines or building new ones.”⁴⁵

⁴⁴ South Dakota State Planning Board, Progress Report, Mar. 15, 1935, p. 220.

⁴⁵ Vermont State Planning Board, Preliminary Report, Apr. 1, 1935, p. 35.

5. THE DEVELOPMENT OF MINERAL RESOURCES

Mineral resources are among the greatest assets of the United States, whether judged by the value of the products as compared with those of other industries or by comparison with the mineral resources of other nations. The utilization of mineral resources played an especially important part in the rapid development of the country, for they supplied an abundance of raw materials and made possible the quick creation of wealth.

The process of exploitation has been pursued energetically with extraordinary technical skill and has resulted in benefit to the Nation as a whole, but serious economic maladjustments that have developed threaten the mineral industries. To overcome many of these difficulties the united efforts of industry and government will be required, frequently Federal and local governments, but in many cases the State government alone. The task of finding the best course of action for a State is one for which State Planning Boards are particularly suited.

Opportunities for State Planning Boards

Nature scattered mineral resources about the world in such an erratic fashion that some areas were endowed lavishly while others were ignored completely, thus establishing environmental factors that frequently constituted a dominant influence on the life of a locality. While it is obviously impossible to create mineral deposits, it is possible to facilitate their discovery through the encouragement of scientific and technical services and, once located, there is an excellent opportunity for State Planning Boards to assist in striving for their best utilization.

Reports from State Planning Boards indicate that most State agencies have already planned work for several years in advance much along the following lines:

1. Areal surveys and specific studies on occurrences and mineral-bearing districts. The areal surveys include topographic and geologic mapping and are an essential foundation for the precise determination of the distribution, quantity, and quality of mineral resources. Specific studies on occurrences are primarily in the nature of assistance to the individual operator, but will yield valuable information to any others in the same district. This type of work is regarded as fundamental and has been carried on by Federal and State geological surveys for years.

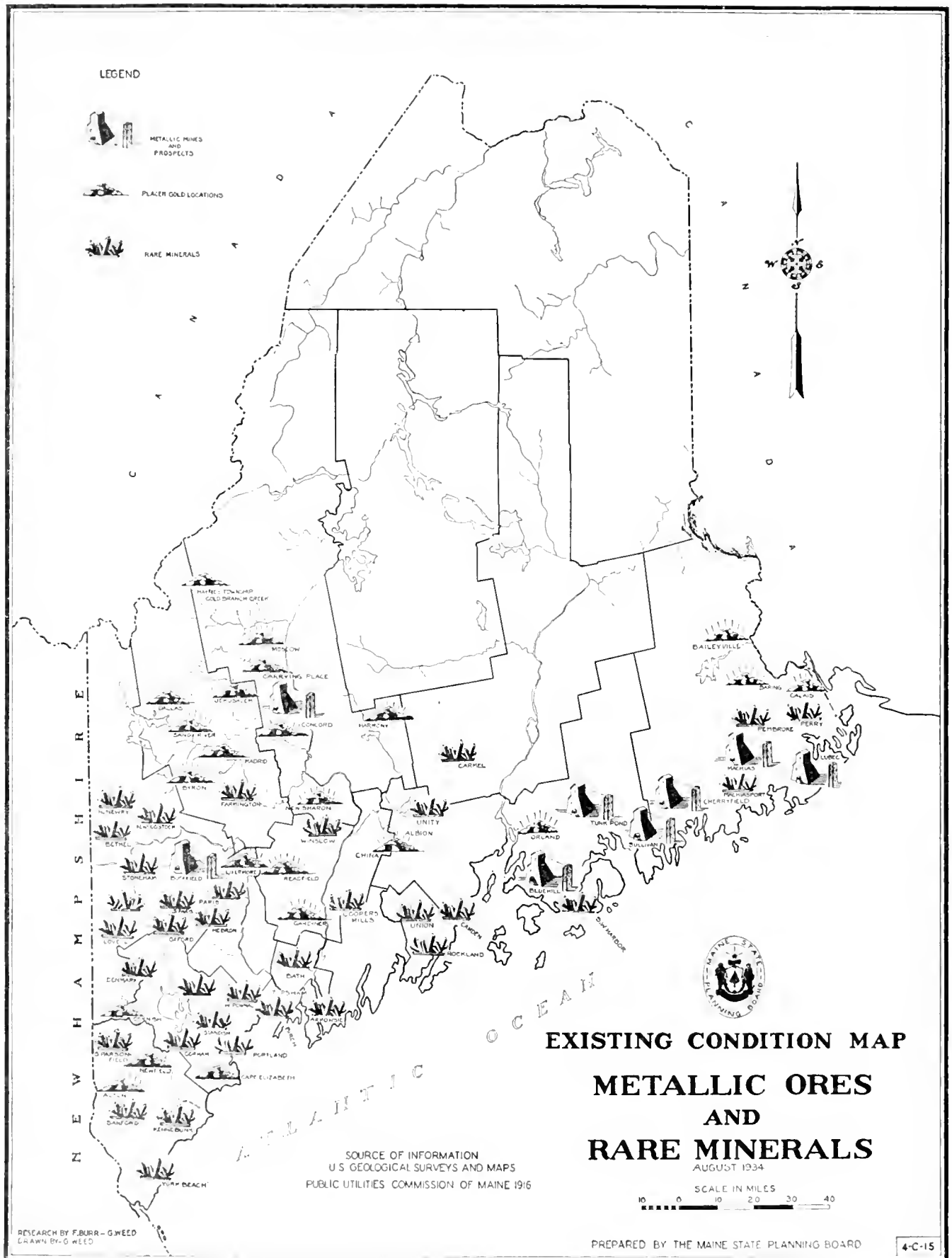
2. Inventories of mineral reserves. Few States in the past have prepared systematic and thorough inventories of reserves, partly because mining companies have been loath to reveal the extent of their taxable property or were unwilling to spend extra money to prove reserves that would not be touched for many years, and partly because the official agencies had not felt the necessity for it. Within the last few years, however, the value of such information has become more apparent, and hearty support for projects of this sort has come from mining men and individuals who are responsible for the determination of Government policy on questions involving mineral resources. The compilation of these estimates and their periodic revision, in the light of new discoveries elsewhere and improvements in the technique of mining treatment and transportation, have been widely recommended by State Planning Boards.

3. Fundamental research in geology. Although work of this sort may not appear to have any immediate value, experience has shown that a short interval usually prevails between the establishment of a scientific fact and a practical application of the principle involved. Private industry and universities have carried on much valuable research, but there is a position in this field for State and Federal surveys, since they can promote close cooperation and free exchange of information.

4. Improvement in the technique of exploration is closely linked with the research just mentioned, as both lead to the discovery of more resources, and also because the investigations are carried on by the same groups. The value of such efforts has been clearly presented in the report of the Wisconsin State Planning Board.

5. Improvement in the technique of mining and metallurgy is necessary if the life of a deposit is to be prolonged after greater depths are reached or other more expensive conditions of operation are encountered. Here again there should be coordination of the three investigating groups. As a part of this work, it would be appropriate to include investigations for the promotion of health and safety of workers. A reduction in the number of accidents has frequently proved to be the most effective means of lowering costs of production.

6. Study of its economic problems is one of the greatest necessities confronting the industry, and may be undertaken by State organizations in cooperation with



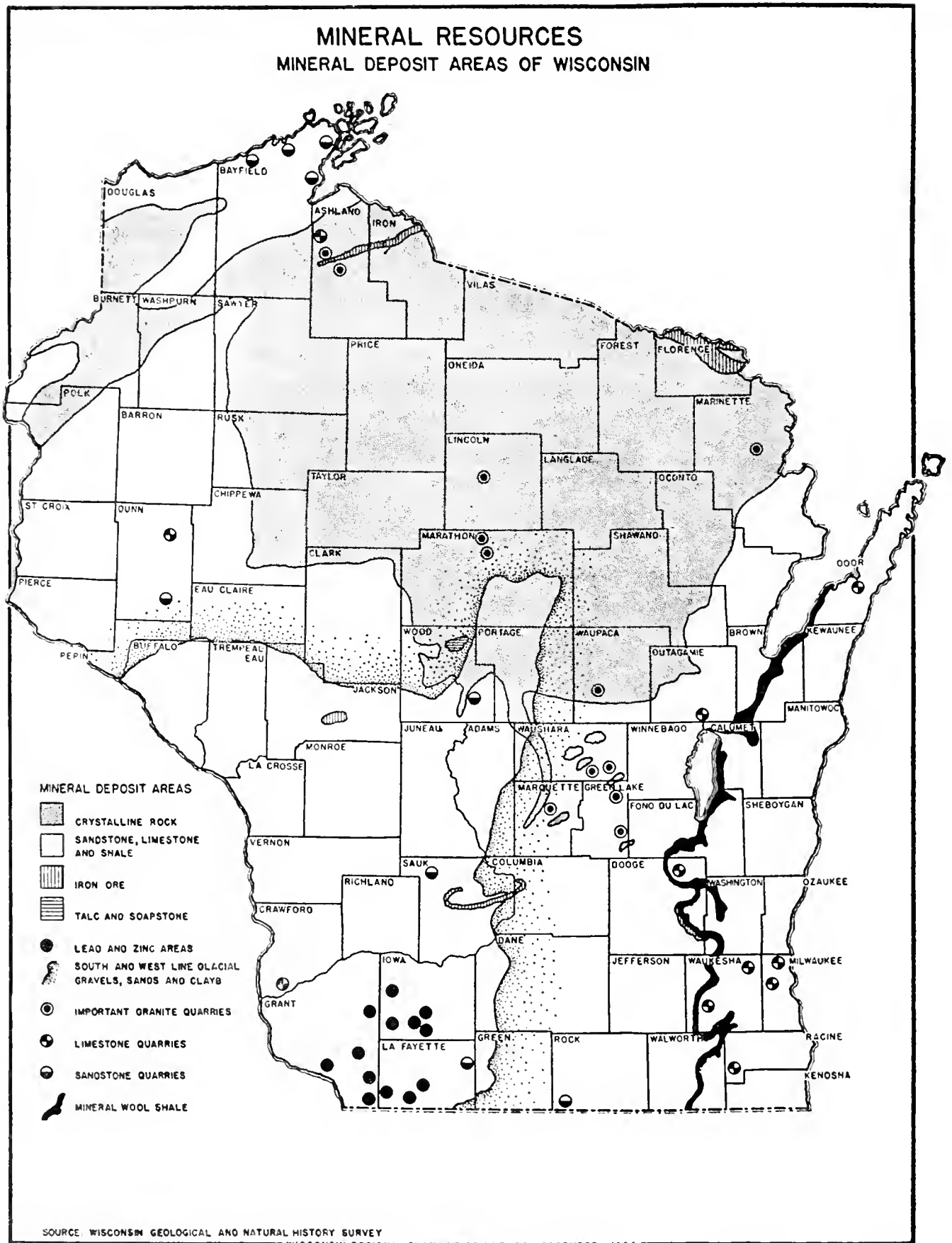
industry with the expectation of considerable profit. The State of Illinois has been among the first to enter this field and very useful contributions have been published by the economics branch of the State Geological Survey.

The State Planning Reports of Illinois and Colorado have recommended closer study of the requirements of consumers in order to improve the marketing of mineral products, and a search for new uses has already been instituted in Michigan. Transportation deserves great attention, not only because it constitutes one of the leading markets for mineral products but also because changes in the system will affect greatly the distribution of products. In this connection, freight rate structures may properly be reviewed. These problems have important technical as well as economic phases and will require consideration from both angles.

In the hope of promoting recovery and providing work for the unemployed, efforts are being made to stimulate mineral production in many localities. Most of the State Planning Board reports acknowledge that such attempts should be preceded by a study of the economic situation of the material in question, for new

mining projects may result in displacement of workers elsewhere in the country, and merely transfer the problem. Not only should the effects of competition between districts be given thought, but also the competition between metals and between fuels and hydroelectric power. Many of the difficulties may be avoided if such efforts are concentrated on those products for which there is an assured market, such as gold and silver, and those base metals with insufficient domestic production.

Closely linked with the economic problems is the social problem of acute unemployment in the areas where a large percentage of the population is dependent upon a mineral industry that is now badly depressed; hence, much thought has been given to the plight of the inhabitants of the coal districts of Illinois and Pennsylvania. In addition to the immediate problem in Pennsylvania, the State Planning Board is concerning itself with the situation that will materialize in the not distant future when the coal in several anthracite regions will be exhausted, and consideration has been given to the possibilities for developing new industries and the rehabilitation of the population in other areas.



6. TRANSPORTATION PROBLEMS

Transportation, as the term is used in this report, covers all methods of transporting passengers and freight from one point to another; and it includes highways, railways and terminals, ocean and inland waterways and ports, airways and airports, pipe lines, and communication lines. Transportation is obviously a basic factor in any plan for the physical development of a city, region, State, or nation.

The growth of transportation systems has taken place in a series of cycles. In the early stages of the development of the country, waterways were of prime importance. Traveling was slow at best, so that communities existed relatively independent of each other.

The steam railroad promoted the growth of large urban districts and made possible the establishment of such centers at a considerable distance from navigable waterways. But the real creation of the present-day metropolitan region started with the perfecting of electric railways and the gasoline-driven motor vehicle. At once the radius connected with a single main port or business center was enormously increased. In the place of communities 4 or 5 miles in diameter, large metropolitan districts have grown up whose radius of influence has extended to 20 miles, 30 miles, or even farther. The motor vehicle has made accessible the areas lying between rail transportation routes so that the various sections of a single State have become physically, as well as politically, part of a single unit for planning.

Transportation studies undertaken by State Planning Boards have taken into account not only the individual problems of these different forms of transportation within the State and as part of a national transportation system, but also the relation of transportation to other features of State development. They have considered the possibility of coordinating the different transportation elements into a unified system in which each will be used for the service it can most effectively perform.

Relation to Other Factors

Sound transportation studies take into consideration the relation of transportation to all other phases of planning and development. The Pacific Northwest report points out that transportation will affect very materially, and in turn, be strongly affected by the development or change in uses of lands; by the development of mineral production; by the development of

water resources for irrigation, power flood control, and navigation; and by related industrial, commercial, and population changes. This regional board has prepared base maps of the various transportation systems in such a manner that one may be superimposed upon another for purposes of studying relationships between the different kinds of transportation, and any can easily be read in connection with maps showing recreational facilities, minerals, power, industries, and so forth.

The Committee on Highways and Transportation of the New York State Planning Board found that new facilities for rapid transportation over highways are changing the location of manufacturing plants; that the manufacturer's lighter raw materials, and parts of many of his products are being transported by highway vehicles, and that even his labor supply, in considerable part, comes to him by motor vehicles. The conclusion was drawn that:¹

"The facilities of transportation by motor vehicles have had a far-reaching influence on the manufacturer; and this will most probably continue to be the case. Not long ago his location was determined largely by the location of railway facilities, sometimes by water shipping facilities. Today highway transportation makes it possible for him to change his buying and selling methods, his operations and even his location.

"It is reasonable to think that the coming of new highway transportation facilities during the past 20 years has had more influence on the location of factories and market centers than the construction of new electric generating plants will have on factories and market centers for the next 20 years. Both factory centers and market centers are now as vitally interested in the costs of transportation as they are in the costs of rents, wages, and power."

Coordinated Transportation

The importance of coordinating various types of transportation facilities is emphasized in the State Planning Reports. The more recently developed facilities have operated, in a large measure, as competitors of the earlier ones and have been laid out and developed from individual rather than comprehensive points of view. The result has been a more or less unavoidable scrambling of transportation facilities. The object of the State and regional planner

¹ State Planning Board Bulletin No. 15, New York State Planning Board, Nov. 22, 1934, p. 3.

is to bring some order out of this chaos and to point out methods by which each of the various means of transportation may be assigned, and, to a certain extent, restricted to its proper sphere.

The Pennsylvania report exemplifies the general attitude when it states:² "The coordination of transportation facilities implies the inclusion of * * * transportation agencies into a general system in which each type of carrier is on an equal basis with all other carriers so that, by united action, they may render more efficient service."

Today, adequate regulation can achieve many of the salutary effects attributed to competition. Many planning boards studied the possibility of eliminating duplicate facilities and preventing an oversupply of transportation facilities and consequent evils which result in idle equipment, cut-throat competition, and ultimately, bankruptcy and unsatisfactory transportation service.

Studies Undertaken as Basis for Coordination

Transportation studies in many fields have been undertaken by State Planning Boards. The Kansas Board found a truck survey was essential to an intelligent approach to the problem of coordinating rail and highway traffic, and afterward, that the study was valuable to transportation agencies and to shippers. Other studies showed, in some cases, duplication of service between railroad lines and truck and bus routes, and in other cases very desirable complementary services. Connecticut transportation studies³ contained: (1) a descriptive survey of the methods and the means of transportation in the State; (2) a description of the routes and service frequency of the several kinds of carriers; (3) a digest of the statutes affecting transportation in Connecticut. Public and private agencies found the data assembled useful, even before it could be completely organized and classified. The Kentucky Report⁴ recommended transportation studies to: (1) ascertain locations of all established transportation lines, terminals, and interchange points within the State; (2) (a) to ascertain volume of traffic * * * passenger, freight, express, and mail * * * carried between adjoining terminals and handled at interchange points by each class of transportation agency, (b) to

ascertain number of trains per day between adjoining terminals and interchange points for railways; (3) to ascertain locations of highway and railway grade crossings.

Other studies, valuable in planning for coordination as well as for the development of the individual transportation agencies, are discussed below under highways, railways, waterways, airways, and pipe lines.

Programs for Putting Transportation Recommendations into Effect

Programs for carrying out the general transportation recommendations have been recognized as essential. Iowa⁵ has set forth as objectives: "(1) to plan the most efficient, coordinated future Iowa transportation system, including all agencies, practicable of realization within 25 years; (2) to prepare definite 10-year construction programs, in harmony with the 25-year plan, for all existing and prospective Iowa transportation agencies." The Iowa Transportation Committee⁶ has presented a tentative outline of the construction needed on the different elements of Iowa's transportation system from 1935 through 1944.

Resulting Benefits

The New Hampshire State Planning Report⁷ points out that when proper integration of transportation facilities has been secured the following types of benefit will result: "(1) geographical network of transportation channels, which will bring all regions and communities of the State into adequate and appropriate relationship under one or more of the types of services; (2) balance between facilities, which will give weight to each type of transportation in accordance with its capacity to serve definite needs; (3) continuity between transportation services, which will insure working connections and transfers; (4) flexibility, promoting periodical adjustment to conditions as they may vary from time to time—such as contraction of one service and expansion of others, as need be; (5) economy of organization and operation, which makes possible rates for transportation commensurate with the value of commodities and passenger service rendered; (6) tax adjustment, which will place all forms of transportation on a comparable basis of taxation."

² Preliminary Report to the Hon. Clifford Pinchot, Governor of the Commonwealth, and the National Resources Board, Pennsylvania State Planning Board, December 1934, pp. 502-503.

³ Report of the State Planning Board to Gov. Wilbur L. Cross, Connecticut, December 1934, p. 11.

⁴ Preliminary Report on a Series of State Planning Studies, Kentucky State Planning Board, September 1934, appendix A, p. 6.

⁵ A Report of Progress of the Iowa State Planning Board, September 1934, p. 363.

⁶ A Report of Progress of the Iowa State Planning Board, September 1934, pp. 421-425.

⁷ New Hampshire State Planning Problems and Recommendations, New Hampshire State Planning Board, July 1934, pp. 61-62.

HIGHWAYS AND OTHER TRAFFIC WAYS

Highway transportation touches more interests than any other type of transportation and has the most varied contacts with life and business. This has been well stated in the Regional Survey of New York and Its Environs:⁸ "The city street is much more than a traffic way. In addition to the functions it performs as a highway in accommodating the movement of vehicles from place to place, the street is the right-of-way that affords access to and from all abutting buildings for all the purposes of business, residential use, policing, scavenging, and fire protection; it is also the public reservation within which are placed the services of water, gas, electricity, and drainage that buildings require for purposes of use, health, and safety; and it is the space that insures, or should insure, to abutting buildings their principal and certain means of obtaining light and air. Where the property is residential, it is impossible to prevent children from playing on the streets."

Comprehensive Highway Planning

Any comprehensive State plan for highways must be carried out mainly by the State highway department but State Planning Boards can help to coordinate the program with that of the counties and municipalities and can do much essential research work which a State department is not often in a position to undertake.

Many arguments for comprehensive highway planning were advanced by State Planning Boards. The Oklahoma Board⁹ declares many improvements could have been made in the organization and alinement of highways and considerable economy could have been effected if there had been a State-wide long-term plan based upon modern traffic-planning principles. North Dakota¹⁰ believes that comprehensive highway plans should be prepared so that counties and townships will undertake construction work only on a planned system. The New York State Planning Board¹¹ reports that although the State spent an average \$48,000,000 during the past 4 years on State highways, a good many State highways are still too narrow, or are in need of resurfacing or rebuilding. Main routes run through congested areas, and roadsides are cluttered with obnoxious buildings, stands, and billboards. If the public funds put into road building are to be used to the best advantage, farsighted planning is necessary to establish the location, direction, and width of roads and

streets so as to provide one of the most direct, convenient, safe, and pleasant ways of travel. This planning should comprehend the entire highway system.

Planning Highways in Relation to other Elements

Several State planning boards called attention to the necessity of planning the highway system in relation to the use of land, recreational resources, industries, and schools.

The Minnesota Planning Board¹² presented plates depicting population per square mile by townships and by counties, and assessed valuation by counties, as an index of highway requirements. This same report¹³ calls attention to the fact that improved highways have made possible consolidated schools, which represent a forward step in elementary education. Highway studies in relation to agricultural and mineral resources were recommended by boards in Utah¹⁴ and the Pacific Northwest Region.¹⁵ The latter suggested in addition that plans for the use of land, recreational resources, power and industries will provide a greatly broadened factual basis for highway planning. State Planning Report of Iowa¹⁶ and Connecticut¹⁷ mention the desirability of studying highways in relation to recreational areas, and Connecticut mentions in this connection studies for flood control. Land use studies appeared, to several State planning boards, to be particularly important in the development of a State highway system. The Arkansas Board¹⁸ recommends that the opening of any new road be deferred, if possible, until the completion of the land-use study, which is to determine the submarginal or unproductive areas for the purpose of relocating the population now in these areas on more productive lands. Hence the construction of roads, schools, and other facilities in areas which are ultimately to be depopulated and used for forests or recreational purposes would be extremely wasteful. The Idaho Board,¹⁹ presenting similar arguments, points out that land-use plans show the way to self-sustaining secondary or county road systems

¹² Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, p. 120.

¹³ Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, p. 125.

¹⁴ A State Plan for Utah, Progress Report, Utah State Planning Board, April 1935.

¹⁵ Progress Report on Regional Planning, Pacific Northwest Regional Planning Board, January 1935, p. 109.

¹⁶ State Plan, Iowa State Planning Board, pt. III (Recreation), p. 25.

¹⁷ A Condensed Report on Planning for Connecticut, Connecticut State Planning Board, October 1934, p. 6.

¹⁸ Preliminary Report of the Arkansas State Planning Board, September 1934, pp. 199-200.

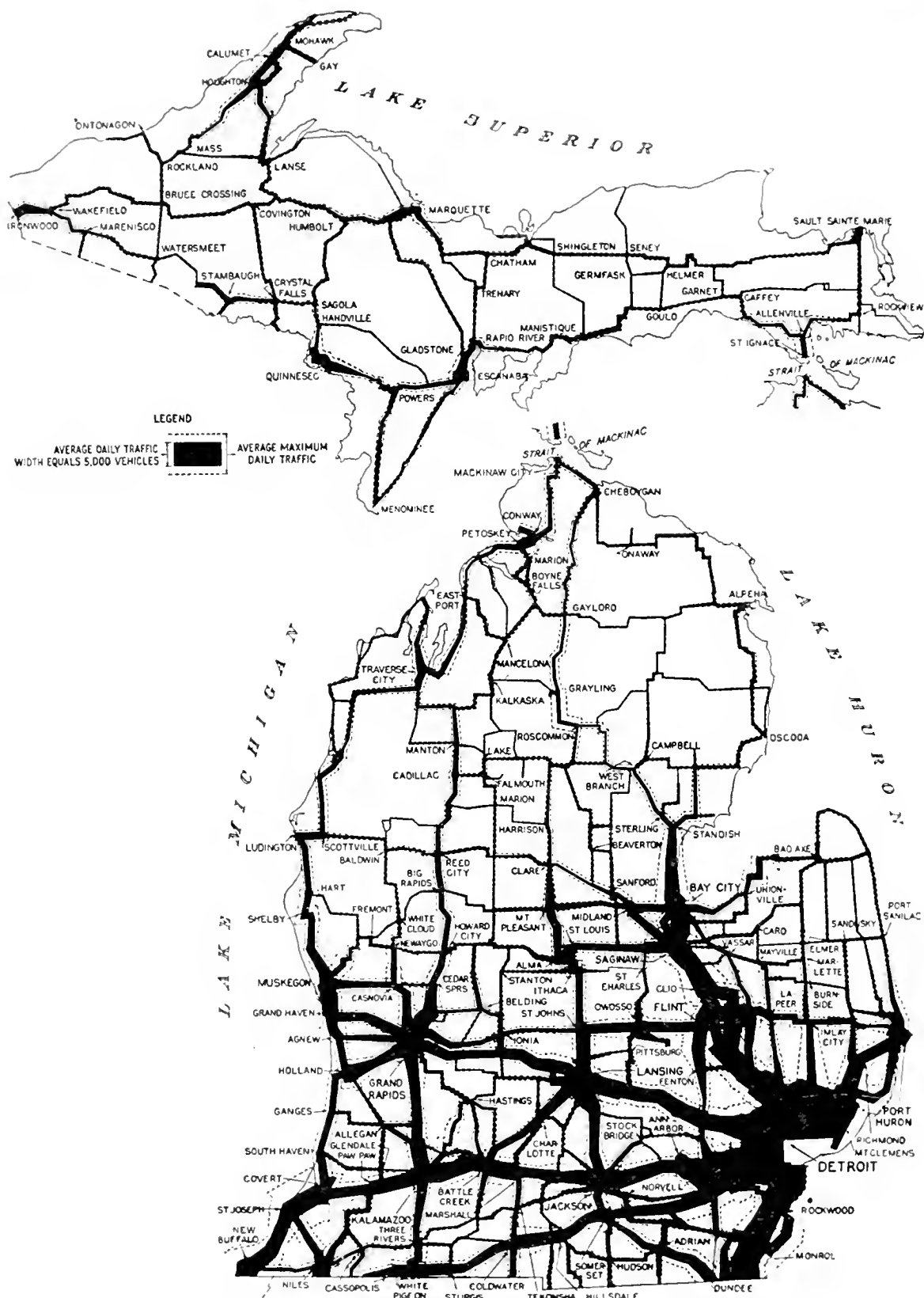
¹⁹ Six Months' Progress Report, Idaho State Planning Board, December 1934, "Exhibit F", pp. 3-4.

⁸ Regional Survey of New York and Its Environs, Volume III, Highway Traffic

⁹ Preliminary Report of Oklahoma State Planning Board, Sept. 7, 1934, p. 88.

¹⁰ Preliminary Report on Transportation, North Dakota State Planning Board, April 1935, p. 12.

¹¹ A Progress Report to the National Resources Board on the Making of a State Plan for New York, New York State Planning Board, September 1934, pt. XI, p. 6.



AVERAGE DAILY TRAFFIC ON MICHIGAN TRUNK LINE HIGHWAYS, 1930-31

MICHIGAN STATE PLANNING COMMISSION

From "Preliminary Report," Jan 11, 1935.

through service. The New York Board ²⁰ states that a recent survey shows that nearly 6 million acres of submarginal farm or idle land will not need farm service roads. The Oklahoma Board ²¹ also recognizes the savings that may be made if highway plans are formulated in studied relation to land-use plans.

Planning Procedure

As an example of the types of highway problems which may be investigated by a State planning board, the list of "vital questions" compiled by the Committee on Highways and Transportation of the New York State Planning Board ²² is of interest. They may be summarized as follows:

1. How long will each type of existing road last and what will be the maintenance charges under present and estimated future traffic?
2. How much will it cost per mile to reconstruct certain existing roads?
3. What is the vehicle mileage on different units in the State and county highway systems and is it increasing or decreasing?
4. What savings per vehicle and what increased vehicle mileage may be expected in case of the improvement of certain roads, and will these increases liquidate the improvements? Should part of such cost be charged to the general public welfare?
5. Can a formula be developed for estimating the use made of and the damage done to major trunk highways by excessively heavy vehicles, and how much of the cost of building such highways may be allocated to the heavy vehicles?
6. What is the approximate annual income from license fees and gasoline tax derived from passenger cars, buses, and motor trucks?
7. What proportion of the highway revenue is collected from residents of rural and urban areas and expended in these respective areas?

The California State Planning Board ²³ believes it to be highly important that a broad-visioned official planning agency attack the following specific highway problems; determination of the proper functions of highways; establishment of definite highway classifications and standards of construction, based upon functions; by-passing of cities; value and use of super-highways, parkways, and other specialized types of primary, heavy-duty highways; need of freeways; control of commercial establishments and advertising along high-

ways; landscaping and fireproofing of roadsides; development of tourways or special routes having high scenic value and definite tourist interest.

Traffic Surveys

A majority of the State planning boards presented the results of traffic surveys. Traffic accidents, volume of traffic at points of entry into the State, traffic flow studies, including origin and destination data, and studies of motor vehicles—registration, number of persons per vehicle, gasoline consumption, passenger-car sales—are a few of the types of traffic studies reported.

A number of the State planning boards found adequate State-wide traffic surveys completed. Some of these were made by the State highway departments. Others were done cooperatively by the State highway department and the Bureau of Public Roads. The Oregon State Planning Council ²⁴ advocated a study of conflicting traffic regulations and motor vehicle legislation in the northwestern States.

Studies of Special Types of Traffic

Trucks and Busses

Various States have made special studies of truck and bus transportation over the State highway system. The Kansas Board ²⁵ studied the ability of the common carrier operating within the State to provide the continuity of service essential to satisfactory transportation. The Indiana Board ²⁶ analyzed the operating methods of common, contract, and private carriers, their financial responsibility and insurance carried, and the extra costs of highway construction and maintenance necessitated by the heavily loaded trucks and busses.

Trucks

Many States have conducted surveys of truck lines and truck traffic from various angles. Kansas ²⁷ has had a comprehensive traffic survey of trucks entering the State to determine among other things the number of trucks operating and the amount of freight carried into the State from outside points, the average length of haul within and outside the State, the number of trucks entering the State empty and crossing the State empty, commodities hauled, county of origin or destination, and weight of load. The collection of these

²⁰ State Planning for New York, Summary of Progress to Governor Herbert H. Lehman, New York State Planning Board, January 1935, p. 66.

²¹ Preliminary Report of Oklahoma State Planning Board, September 1934, pp. 90-91.

²² State Planning Board Bulletin No. 15, New York State Planning Board, November 1934, pp. 6-8.

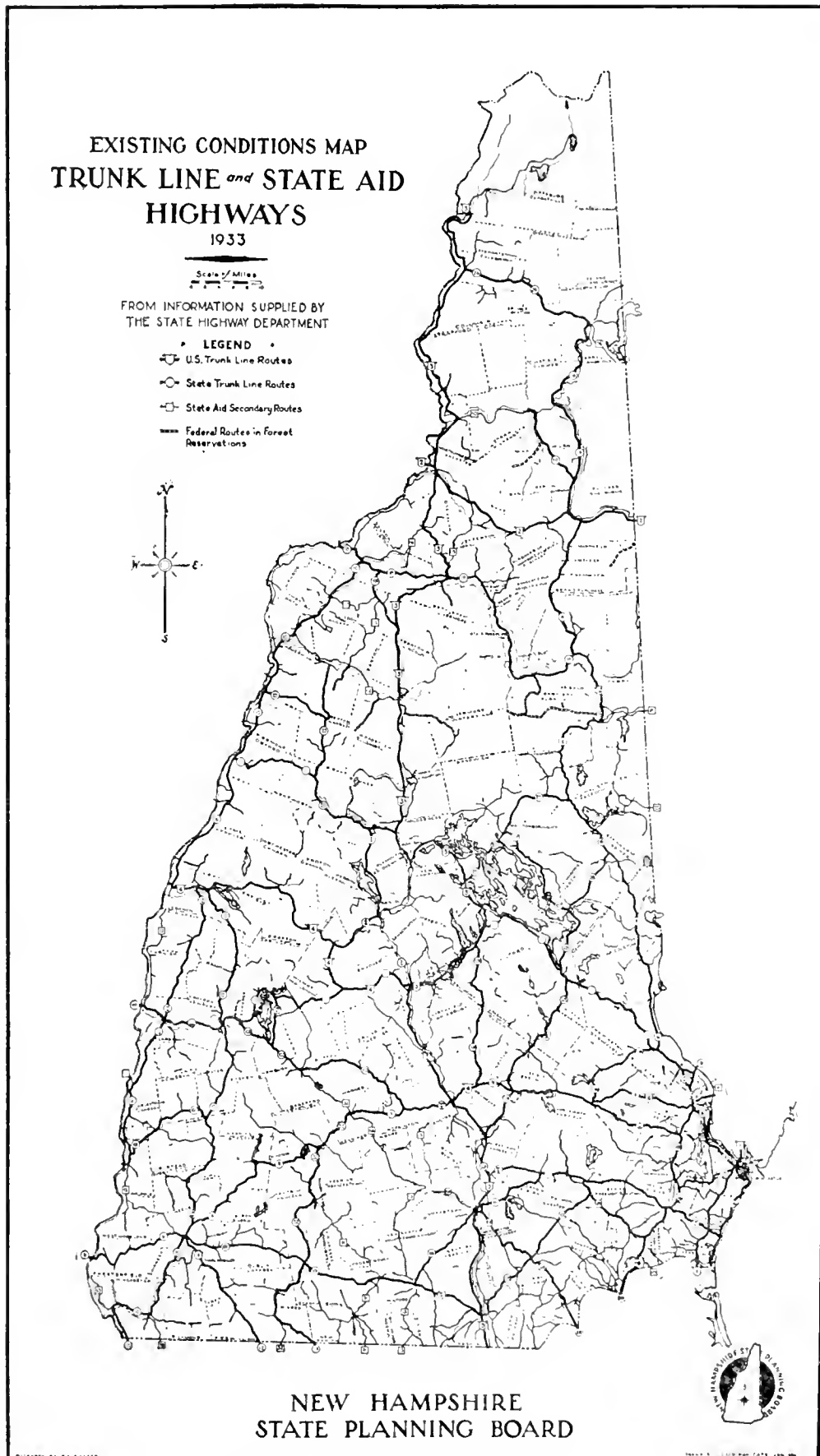
²³ A report to the National Resources Board on the Work of the California State Planning Board, December 1934, pp. 68-69.

²⁴ Six Months' Progress Report, Oregon State Planning Council, January 1935, p. 168.

²⁵ Progress Report, Kansas State Planning Board, September 1934, pp. 109-110.

²⁶ Preliminary Report, Indiana State Planning Board, 1934, vol. II, appendix C, sec. III, pp. 59-60-63-64, sec. IV, pp. 68-69.

²⁷ Progress Report, Kansas State Planning Board, September 1934, pp. 107-108-112, and the Coordination of Transport, March 1935.



From "State Planning—New Hampshire," Mar. 15, 1935.

data was facilitated by the fact that a Kansas statute requires every truck entering the State to stop at a "port of entry" in order that the Bureau of Inspection may determine whether it has complied with the tax laws. The cooperation of the Kansas Corporation Commission was secured, and the driver of each truck entering the State during the month of May was required to supply the desired information. A map giving the routes of truck common carriers shows that they are, in general, not supplementing rail service, in the sense of serving otherwise inaccessible points, but are competing with the rails along their entire length.

The Arkansas State Planning Board²⁸ also found freight truck lines and passenger bus lines largely paralleling and duplicating railroad service. A careful study would be necessary to determine how much of this duplication is warranted.

The Colorado State Planning Board²⁹ studied truck registration over a period of years; the relative tonnage of coal shipped by truck or wagon and by railroads; the percentage of truck traffic to the total traffic; and truck traffic on mountain roads and over mountain passes, which has produced a large number of serious accidents.

A map prepared by the Maine State Planning Board,³⁰ showing the highways used by motor trucks carrying freight and express for hire over regularly scheduled routes within the State, indicates that the entire population of the State is served by common carrier routes.

The New Hampshire Report³¹ contains two interesting traffic flow maps, showing truck traffic in 1926 and 1931. A Wisconsin study³² of automobile registrations show that the rate of truck increases has exceeded the rate of general automobile increases since 1918. The trend toward truck utilization in Wisconsin has been marked and reasonably uniform despite the depression.

The Indiana State Planning Board³³ made a special study of lawful and unlawful truck operators, trucking brokers, and "share-expense agencies", who help private car owners secure paying passengers when they are driving on pleasure or business trips, an evil which already has been banned by one State legislature.

Truck regulation and the establishment of rates received the attention of some of the State planning

boards. The Minnesota Board³⁴ states that the ever increasing use of truck transportation makes the question of regulation an important one. The Indiana Board³⁵ also advocated study of the trucking rate structure. Both the Minnesota and Indiana Boards recommended studies of desirable tax requirements for trucks.

Busses

The Kansas State Planning Board³⁶ made a survey to determine the seating capacity and the number of passenger busses which (1) entered the State to terminate their trip in some Kansas community and (2) used Kansas roads as a bridge to some other States. In New Hampshire³⁷ the mileage of motor bus routes in operation is practically identical with that of the railroads.

The State Planning Board of Indiana³⁸ analyzed the comparative advantages and disadvantages of bus travel to that offered by steam and electric railroads, studied the questions of safety of travel in public buses and the regulation and taxation of them.

Other Highway Studies

Various other special types of highway studies were made or compiled by State Planning Boards. The following are examples: Studies of highway location³⁹ in relation to (a) density of population, (b) per capita investment, (c) trade centers served, and (d) contributing auxiliary roads; number of licensed passenger cars, number of licensed trucks, and amount of gasoline consumed per mile of highway; mileage of highways in areas of unit per (a) \$1,000,000 of assessed valuation, (b) 100 square miles, (c) 1,000 population;⁴⁰ percentage of the population of the State served by the primary, secondary, and supplementary highway system;⁴¹ percent of population and land area and number of incorporated villages and towns lying more than 5 miles from a State highway,⁴² studies of the problems involved in the administration of county roads by the

²⁸ Report of State Planning Board to National Resources Board, Minnesota State Planning Board, pt. II, p. 122.

²⁹ Preliminary Report, Indiana State Planning Board, 1934, vol. II, appendix C, sec. III, pp. 53-56.

³⁰ Progress Report, Kansas State Planning Board, September 1934, pp. 107-108.

³¹ State Planning in New Hampshire, State Planning and Development Commission, March 1935, p. 65.

³² Preliminary Report of Indiana State Planning Board, 1934, vol. II, appendix C, sec. IV, pp. 67-71.

³³ State Planning and National Resources Report for Tennessee, Tennessee State Planning Board, December 1934, p. 5.

³⁴ Progress Report, Colorado State Planning Commission, April 1935, Transportation, p. 1.

³⁵ A State Plan for Missouri, Preliminary Report, Missouri State Planning Board, June 1934, p. 40.

³⁶ Progress Report, Kansas State Planning Board, September 1934, p. 113.

²⁸ Preliminary Report—Arkansas State Planning Board, September 1934, p. 245.

²⁹ Preliminary Report to the National Resources Board on State Planning in Colorado, Colorado State Planning Board, August 1934, pp. 33-34.

³⁰ Maine State Planning, March 1935, vol. I, no. 5, map 2, fig. 30.

³¹ State Planning in New Hampshire, New Hampshire State Planning Board, March 1935, p. 65.

³² A study of Wisconsin, Its Resources Physical, Social, and Economic Background, Wisconsin, Regional Planning Committee, December 1934, p. 417.

³³ Preliminary Report, Indiana State Planning Board, 1934, vol. II, appendix C, sec. III, pp. 54-61.

State Highway Department;⁴³ pavement widths;⁴⁴ mileage of different types of pavement;⁴⁵ percentage of farms located on concrete, brick, asphalt, and macadam roads.⁴⁶

Special Types of Highways

Highways to serve special purposes were studied by a number of State Planning Boards.

Parkways

Inspired by the original Bronx River Parkway completed in 1925, the idea of providing special roadways through parklands for the rapid movement of passenger vehicles has spread rapidly. The parkway has been defined by Mr. Edward M. Bassett⁴⁹ as "a strip of public land devoted to recreation, over which the abutting owner has no right of light, air, or access." In many cases, however, the term "parkway" is still incorrectly used to designate city streets which have some ornamental treatment and from which commercial traffic is excluded. The term "boulevard" describes a highway provided with landscape treatment but to which abutting property has the right of direct access.

The parkway has proved most useful in metropolitan areas where it supplements and for considerable distances may parallel the general traffic routes. It provides traffic capacity to handle the tremendous week-end load of passenger cars carrying those who want to get out into the open air for week-end recreation.

Recently, construction of parkways has been suggested in entirely rural areas where they can be combined with projects for the preservation of natural scenic beauty. The outstanding examples of this type are the proposed Green Mountain Parkway and Shenandoah-Great Smoky Parkway.

Among the States whose planning boards recommended parkways are Kansas,⁵⁰ Missouri,⁵¹ New Jersey,⁵² and New Hampshire.⁵³ The New Hampshire Board points out that the State has scenic and recreational values which it should preserve for all time for the greatest number of people. Parkway well located

on hillsides and mountain sides overlooking rivers, lakes, and valleys will add to the enjoyment of the visitor and foster State pride.

The Missouri State Planning Report⁵⁴ has suggested a system of parkways for the State, serving all sections, passing in the vicinity of the principal cities but not entering them, because of the excessive cost of acquiring adequate rights-of-way. The system is so designed that it could be connected with similar systems in adjoining States. The location of the proposed parkways has been studied in relation to United States highways and is designed for operation independent of the present highway system but the reports state that there is no objection to using parts of the existing highway system in sparsely settled sections where additional rights-of-way can be secured to carry out the purpose of the parkway. The report suggests that the width of the right-of-way will depend largely on topography and scenic views, but that it should be from several hundred to 1,000 feet in width. At places on ridge routes approximately 300 to 400 feet might provide the necessary protection of the scenery, while at other points widths in excess of 1,000 feet might be necessary for limited distances to control lake shores, stream beds, cliffs, or other special features.

Freeways or Limited Ways

A "freeway" is similar to a parkway in that direct access from abutting property is eliminated. It differs from a parkway in that it accommodates both pleasure and commercial traffic.

The Westchester County (N. Y.) Park Commission was farsighted in providing for this type of highway. They planned at the start to supplement their magnificent system of parkways with one or more routes through park property which would be designed to carry both "pleasure" and commercial traffic.

Limited ways have been proposed for New England by the New England Regional Planning Commission.⁵⁵ These proposed limited ways incorporate the following features: (1) Separation of opposing lines of traffic; (2) grade separation or rotary-traffic design of intersection; (3) control of borderland to prevent access except at properly designed intersections; (4) provision for pedestrian paths along the highway and over bridges; and (5) proper curves, banking, and visibility for fast-moving traffic. It is evident from the above analysis that legally a "limited way" is the same as a "freeway", which has been defined by Mr. Edward M. Bassett⁵⁶ as a "strip of public land devoted to

⁴³ A State Plan for Utah, Progress Report, Utah State Planning Board, April 1935, p. 255.

⁴⁴ Six-Months' Progress Report, Oregon State Planning Council, January 1935, vol. III, pp. 167-168.

⁴⁵ Preliminary Report on a Series of State Planning Studies, Kentucky State Planning Board, September 1934, ch. V, p. 6.

⁴⁶ A Preliminary Report on State Planning, Michigan State Planning Commission, September 1934, p. 266.

⁴⁹ Preliminary Report of National Resources Board, New Mexico State Planning Board, December 1934, p. 139.

⁵⁰ Report of the Illinois State Planning Commission, December 1934, p. 87.

⁵¹ In City Planning, July 1933, p. 138.

⁵² Progress Report, Kansas State Planning Board, September 1934, p. 53.

⁵³ Proposed Ozark Parkway, Missouri State Planning Board, December 1934, p. 1.

⁵⁴ A Preliminary Report Upon Planning Surveys and Planning Studies for the State of New Jersey, New Jersey State Planning Board, September 1934, p. 25.

⁵⁵ New Hampshire State Planning Problems and Recommendations, New Hampshire State Planning Board, July 1934, pp. 59-61.

⁵⁶ Proposed Ozark Parkway, Missouri State Planning Board, December 1934, pp. 1-11.

⁵⁷ A Plan for New England Progress Report to the National Resources Board, New England Regional Planning Commission, October 1934, p. 13a.

⁵⁸ In City Planning, July 1933, p. 138.

movement, over which the abutting owner has no right of light, air, or access."

The New England Regional Planning Commission has prepared an attractive 12-page pamphlet, entitled "Limited Motorways", in which are set forth its proposals. This report ⁵⁷ claims that economies will result from the adoption of limited ways in land costs, costs of preparing the right-of-way, paving costs, and accident costs.

Since legislation is needed to permit State highway commissioners to build limited ways, the New England Regional Planning Commission asked Mr. Thomas MacDonald, chief of the Bureau of Public Roads, to make a study of such legislation. The model enabling act for freeways, which he prepared, is given in the Progress Report.⁵⁸

Miscellaneous Special Highways

The Illinois State Planning Consultant,⁵⁹ calling attention to the rapid increase in freight shipments by truck, reports that in his opinion the construction of special trucking highways in some areas is within the realm of possibility. The State Planning Board of Minnesota ⁶⁰ recommended that careful study be given to the questions (a) of the desirability of separating truck traffic from that of passenger vehicles and (b) of practical methods of financing the dual system of highways required. The New Hampshire Consultant ⁶¹ has also considered the desirability of separating truck and pleasure traffic either through the separation of the roadways within a single right-of-way or upon separate rights-of-way.

Another type of highway, known as the "tourway", limited to passenger vehicles, serving the various recreational and forest areas in the State and connecting with various national highways, has been advocated by the Minnesota Planning Board.⁶² The board points out that existing roads and highways may be used in part in laying out this type of highway.

Similar scenic park-to-park roads have been proposed for Utah ⁶³ and Kentucky.⁶⁴

⁵⁷ In City Planning, July 1933, p. 9.

⁵⁸ A Plan for New England Progress—Report to the National Resources Board, New England Regional Planning Commission, October 1934, appendix 3, Legislation.

⁵⁹ Report of the Illinois State Planning Commission, December 1934, pp. 84-85.

⁶⁰ Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, p. 122.

⁶¹ New Hampshire State Planning Problems and Recommendations, New Hampshire State Planning Board, July 1934, pp. 58-59.

⁶² Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, pp. 122-123.

⁶³ A State Plan for Utah, Progress Report, Utah State Planning Board, April 1935, pp. 259-261.

⁶⁴ Preliminary Report on a Series of State Planning Studies, Kentucky State Planning Board, September 1934, p. 18.

Roadside Improvement

Roadside improvement has received much attention by the State Planning Boards and is facilitated by the requirement that at least 1½ percent of the Federal highway appropriations to the States must be spent for landscaping highways. Under this provision rapid strides are being made by the Oregon State Highway Commission.⁶⁵ The regulations of the Bureau of Public Roads require the building of footpaths along heavily traveled highways adjacent to cities.

The Colorado State Planning Board ⁶⁶ recommends that more attention be given to the landscape development of highways, particularly in the mountain districts where planting is needed to cover road scars and to prevent erosion, and that a landscape architect be employed by the State highway department to advise not only on the improvement of the roadside, but also on the planning of highways to fit the topography.

The Florida State Road Department ⁶⁷ considers the securing of adequate rights-of-way one of the most important elements of highway beautification. The proper grading and planting of the roadside also are considered important.

Believing that the improvement of the roadsides will return to Minnesota many times the original investment in enhanced tourist trade and favorable advertising of the State's recreational resources, the State Planning Board ⁶⁸ recommends (1) wide rights-of-way for all truck highways, providing adequate space for proper drainage, grading, and planting operations; (2) legislation establishing State control of the location of all signs and roadside structures such as refreshment stands, gasoline filling stations, and wayside markets adjacent to the right-of-way.

Long-Term Plans

The New Hampshire State Planning Report ⁶⁹ recommends, for the development of the comprehensive highway plan, a program of expenditures to be tied in with the general works program, covering a 6-year period and advanced 1 year annually. Ten-year highway construction programs were advocated by the

⁶⁵ Six Months' Progress Report, Oregon State Planning Council, January 1935, vol. III, p. 167.

⁶⁶ Preliminary Report to the National Resources Board on State Planning in Colorado, p. 37.

⁶⁷ Progress Report, Florida State Planning Board, December 1934, pp. 27-28.

⁶⁸ Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, p. 121.

⁶⁹ New Hampshire State Planning Problems and Recommendations, New Hampshire State Planning Board, July 1934, p. 59.

State Planning Boards of Colorado,⁷⁰ Maryland,⁷¹ Minnesota,⁷² and Virginia.⁷³

A 5-year construction program for highway improvements has been prepared by the New York State Planning Board through its committee on public-works program under the chairmanship of Col. Frederic S. Greene, superintendent of public works. The recommendations presented by this committee involved a 200-million-dollar program described as follows:⁷⁴

"To designate in detail a highway program for 5 and for 10 years is not practical, for the reason that the State highway program necessarily depends year by year upon the appropriations which the Governor and the legislature deem advisable to make. The State highway system is definitely designated by law and contains 13,930 miles, of which 1,499 miles are as yet earth roads, which roads are to be improved as rapidly as appropriations permit. The logical program, therefore, would be first to complete this mileage, after which the old roads on the system previously improved, but now inadequate to carry the increased modern traffic, should be rebuilt. It is important to rebuild old bridges, many of which on the present improved system are inadequate. Either they are too weak to carry present highway loads, or they are badly located, having in many instances sharp curves at both ends of the bridge. Both of these defects occur at many of the older bridges. In the 5-year program it is recommended that 456 highway bridges be replaced at an estimated cost of \$6,600,000.

"Another factor of importance in any highway program is the elimination of our more dangerous grade crossings, both at railroad crossings and at intersections of important highways.

"To sum up, any adequate highway program must contain five elements, which are listed in the order of their importance:

- "1. General maintenance of already improved roads.
- "2. Reconstruction of improved roads which have become inadequate to carry modern traffic.
- "3. Reconstruction of inadequate bridges.
- "4. Construction of grade-crossing-elimination structures.
- "5. Construction of new highways.

⁷⁰ Progress Report, Colorado State Planning Board, April 1935, Transportation, p. 2.

⁷¹ Preliminary Report, Maryland State Planning Commission, August 1934, pp. 12-30.

⁷² Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, pp. 127-128.

⁷³ Progress Report, Virginia State Planning Board, August 1934, p. 13.

⁷⁴ State Planning Board Bulletin No. 18, New York State Planning Board, January 1935, pp. 5, 6.

"The construction of new highways is placed last in importance owing to the fact that the State system has now so far progressed that practically every point of importance in the State can be reached over an improved hard-surfaced road."

This 5-year program called for the replacement by modern structures of 30 existing railroad-highway grade-crossing eliminations and the construction of 19 new eliminations.

Future Highway Tasks

State Planning Boards report monumental highway tasks lying before them. The Kentucky Planning Consultant⁷⁵ reports that a comprehensive and integrated system of highways has not yet been established by the State. Essential data are lacking.

The State Planning Consultant believes that the revision and completion of the mapping of the State by the United States Geological Survey, the making of an aerial map, the conducting of a comprehensive traffic survey, and the keeping of accident records by the State highway department, all of which are fundamental in designing a rational plan for the development of a State highway system. The studies would include a long-range program of improvements.

The Ohio,⁷⁶ Minnesota,⁷⁷ and North Dakota⁷⁸ Planning Boards believe the principal highway task facing their States is not the building of additional new routes. In North Dakota the board believes that the construction of new mileage should be very limited until such time as there are sufficient funds to maintain adequately the mileage already constructed. The improvement of existing roads is the principal task ahead in Ohio and Minnesota. The Colorado board⁷⁹ advocates further studies to determine whether highway widening in many cases will be more satisfactory in the long run than building additional routes. In Illinois,⁸⁰ the highway problem resolves itself into a threefold objective: (1) The completion of the primary system under the existing Federal-aid plans; (2) an ultimate concentration on improvement of the vast mileage of secondary and tertiary highways; and (3) the execution of a planned program of grade separation.

⁷⁵ Preliminary Report on a Series of State Planning Studies, Kentucky State Planning Board, September 1934, ch. V, p. 5.

⁷⁶ Preliminary Report on a Series of State Planning Studies—Ohio State Planning Board, August 1934, ch. V, p. 5.

⁷⁷ Report of State Planning Board, to National Resources Board, Minnesota State Planning Board.

⁷⁸ Preliminary Report, North Dakota State Planning Board, 1935, Transportation, p. 12.

⁷⁹ Preliminary Report to the National Resources Board on State Planning in Colorado, Colorado State Planning Board, August 1934, pp. 34, 35.

⁸⁰ Report of the Illinois State Planning Commission, December 1934, p. 84.

RAILROADS AND RAIL TERMINALS

The development of railroad lines and their freight and passenger terminals is dependent primarily on the initiative of the railroad companies but is nevertheless of such public importance that it is an essential part of any State or regional plan.

A brief history of railroad development within the area being studied is essential in order to understand the problems involved. Through trunk-line railroads are primarily carriers of freight and it is therefore essential that they follow comparatively low-grade routes over which heavy freight trains can be economically operated. The prevailing grades upon such railroad lines fix to a considerable degree their standing as trunk-line facilities and almost all available routes already have been utilized.

The sites for suitable trunk-line freight and passenger terminals are also limited and, as a result of the rapid increases in land values during the past 2 or 3 decades, it would now entail almost prohibitive expense for another railroad to obtain such facilities as would enable it to compete with existing lines. It is therefore true in most cases that, for State and regional planning purposes, it can be assumed that the present trunk-line routes are the only ones that need be considered.

Essentially a National Problem

Railroads have been recognized by most state planning Boards as essentially a national transportation medium whose major problems can be solved only as part of a comprehensive national plan. The Arkansas State Planning Board reports:⁸¹

"Any broad approach to the State-wide solution of the railroad problem with its many ramifications leads inevitably to the consideration of the effect certain readjustments might have on adjoining States, and on the whole national transportation system. Likewise, it becomes apparent at once that the various State boundaries have no direct relation to the comprehensive planning of the closely knitted and inter-related network of railroads throughout the Nation."

The Oklahoma State Planning Board⁸² likewise pointed out the fact that State boundary lines bear no relation to the railroad network.

The Pacific Northwest Regional Report states:⁸³

"Railroads particularly are a national problem, and the solutions of the railroad problems of the region lie in the meeting of the national needs."

The Kentucky State Planning Report emphasized

both the national aspects of railroad problems and the need for transportation coordination when it stated:⁸⁴

"The problems with respect to railroads are much the same in Kentucky as in other States. Establishing balance between the facilities and the demand for this type of transport within the framework of a generalized national scheme constitutes the solution. Coordination with other types of transport into a well-articulated system in which every type performs the function for which it is best fitted is a part of this solution."

Relation to Other Elements

Planning boards have recognized the fact that railroad problems can be solved only by taking into consideration many other elements. The related problems of railroads and highway carriers already have been briefly discussed. The California State Planning Board⁸⁵ points out the particular coordinating service that State planning boards are in a position to offer:

"Progress which has been made in planning and re-arranging transportation facilities in cities and regions elsewhere in the country indicates that a central agency, such as the State planning board, can bring about improvement in the arrangement of facilities and in transportation service which is not now and cannot be accomplished by any branch of the transportation industry or existing governmental division."

The California State Planning Board calls attention to the value of State planning boards in preventing and solving problems of conflict between the railroads and industrial and residential developments, as follows:⁸⁶

"Through the communities of the San Gabriel Valley four main-line railroads * * * parallel each other, the lateral distance between the northerly and southerly lines being about 16 miles. This means that there is an area some 50 miles long and about 16 miles wide where this conflict between railroad and industrial development and residential growth has seriously interfered with the use and value of property for either purpose."

From Albuquerque, N. Mex., to El Paso, Tex., the Sante Fe Railroad runs along the bottom lands of the Rio Grande. Floods and the silting of the river bed are liabilities to the railroad which will be greatly lessened by the proposed silt and erosion control.⁸⁷

⁸¹ Preliminary Report on a Series of State Planning Studies, Kentucky State Planning Board, September 1934, ch. V, p. 16.

⁸² Report to the National Resources Board on the Work of the California State Planning Board, December 1934, p. 153.

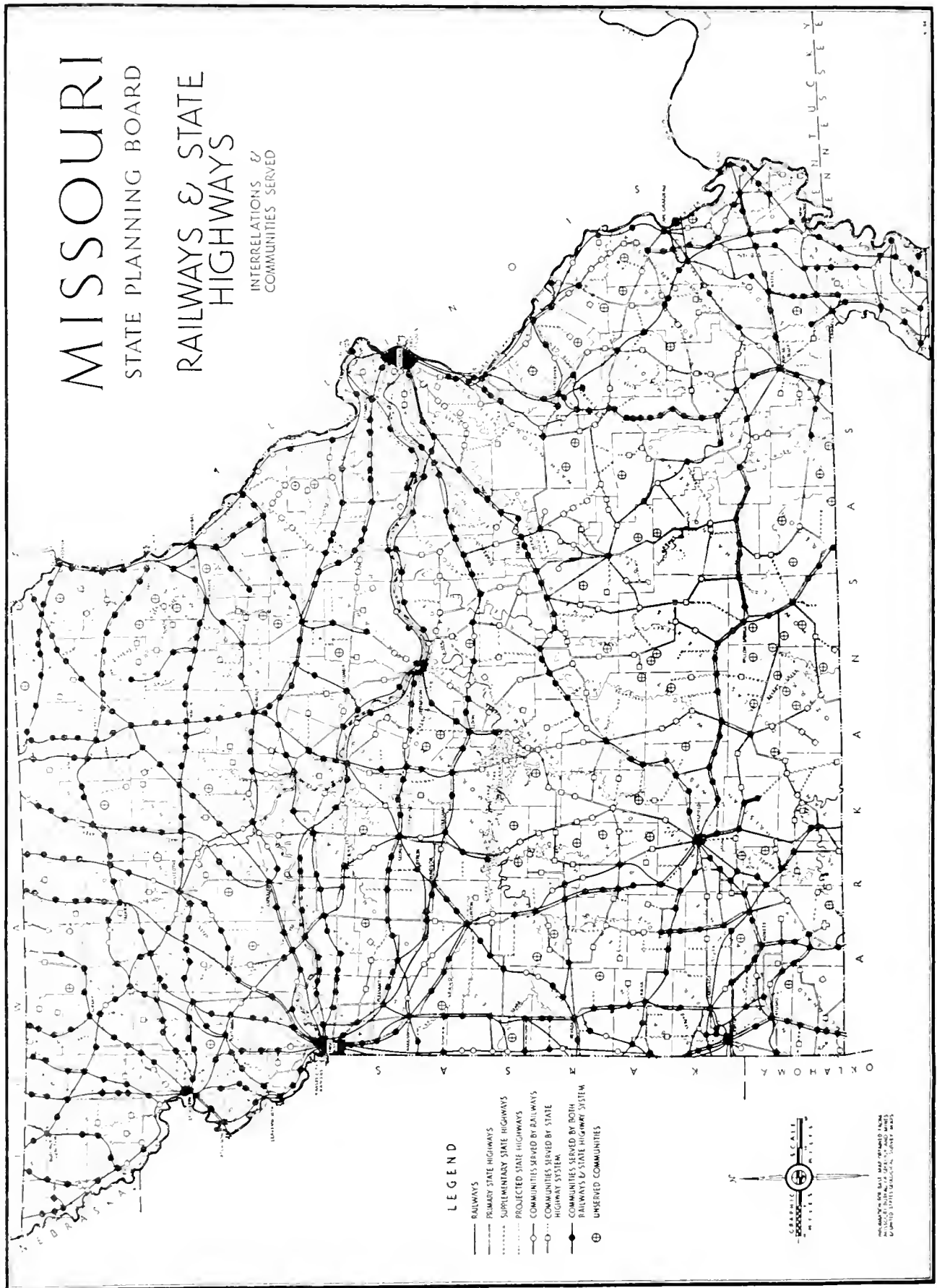
⁸³ A Report to the National Resources Board on the Work of the California State Planning Board, December 1934, p. 153.

⁸⁴ Preliminary Report to National Resources Board, New Mexico State Planning Board, December 1934, pp. 135-136.

⁸⁵ Preliminary Report of the Arkansas State Planning Board, Sept. 10, 1934, p. 221.

⁸⁶ Preliminary Report of the Oklahoma State Planning Board, Sept. 7, 1934, p. 93.

⁸⁷ Progress Report on Regional Planning, Pacific Northwest Regional Planning Board, January 1935, p. 155.



Aspects of the Railroad Problem Emphasized by Different State Planning Boards

Improved Railroad Facilities

The Colorado State Planning Board⁸⁸ points out that there is a greater need than ever for improved railroad transportation. A particular need is more speed and better roadways upon which to maintain schedules. Faster and lighter trains and power units, and improvements in alinement and ballasting on such through routes as that portion of the Denver and Salt Lake Railroad between Denver and Orested are especially important. The Illinois State Planning Consultant⁸⁹ suggests studies to determine the public advantages which would result from the continued improvement of motive equipment and rolling stock. The Pacific Northwest regional planning consultant⁹⁰ points out that in a region with abundant and economical water power, and with several mountain barriers, it is appropriate that especially careful study be given to the electrification of such lines as may have sufficient present or prospective traffic density to warrant the change.

New Railroad Lines

The Colorado report⁹¹ also suggests that two new railroad lines in the State are desirable, one a connection which would result in the saving of approximately 70 miles in distance, the other the construction of a branch line into untapped territory. The Utah preliminary plan on transportation⁹² suggests, in the following statement, consideration of the desirability of new lines.

"Extension of rail facilities into sections of the State where they are not available now must be considered. It is said the largest productive area in the United States without rail facilities is in the Uintah Basin. To be sure, there are now only 17,000 people living in Uintah and Duchesne Counties and the present production warrants neither passenger nor freight railroad lines. The question, however, to be decided by the State plan is not whether rail service is needed now but whether the resources of the districts are sufficiently large to plan for a road in the future. This check on the resources in this district will be part of the State plan."

⁸⁸ Preliminary Report to the National Resources Board on State Planning in Colorado, Colorado State Planning Board, August 1934, p. 28.

⁸⁹ Report of the Illinois State Planning Commission, December 1934, p. 83.

⁹⁰ Progress Report on Regional Planning, Pacific Northwest Regional Planning Board, January 1935, p. 108.

⁹¹ Preliminary Report to the National Resources Board on State Planning in Colorado, August 1934, p. 26.

⁹² Preliminary Plan on Transportation, Utah State Planning Board, October 1934, p. 3.

The Kentucky State Planning Report⁹³ calls attention to the fact that several sections of the State are without railroad facilities. In the Green River Basin an area of 2,500 square miles and in the valley of the Upper Cumberland River an area of 5,700 square miles have no railroads. Certain mountain counties also are without railroad facilities. Much of this area is rich in natural resources, particularly coal and timber, although poor in farm land.

Abandonment of Existing Railroad Lines

In the matter of abandonment of existing railroad lines, the first step undertaken by many boards was a mapping and computation of the mileage of railroad lines abandoned to date.

The Arkansas State Planning Board⁹⁴ reports abandonments since 1922 amounting to approximately 286 miles. In addition, applications have been made to the Interstate Commerce Commission for the abandonment of 99.6 additional miles of railroad lines. A large mileage of lines has been abandoned in Colorado. Since 1900 approximately 967 miles out of a total of 5,911 miles of track have been given up. Twenty-four percent of the total abandonments occurred between 1900 and 1920, and 76 percent between 1920 and 1934. In some States, use of abandoned railroad rights-of-way for highways is being considered. Kansas has an unusually high railroad density, especially in the eastern half, but this condition is being modified. The board reports:⁹⁵ "Approximately 500 miles of railroad have been abandoned during the past year and applications are on file for the abandonment of 80 miles more. While Kansas has but 4 percent of the rail mileage in the United States, her abandonments have amounted to nearly 10½ percent of those granted by the Interstate Commerce Commission since 1932. * * * This high figure may be accounted for in part by the original great density caused by unwise building in the 1880's. The general depression has also played its part, but the competition of innumerable motor vehicles has been the outstanding cause."

On the other hand, in Ohio⁹⁶ there have been very few trackage abandonments since 1900. In Oklahoma⁹⁷ six stretches of line comprising a total of more than 100 miles have been abandoned since 1932.

⁹³ Preliminary Report on Series of State Planning Studies, Kentucky State Planning Board, September 1934, ch. V, p. 15.

⁹⁴ Preliminary Report of Arkansas State Planning Board, September 1934, pp. 229-231.

⁹⁵ Progress Report, Kansas State Planning Board, September 1934, p. 108.

⁹⁶ Preliminary Report on a Series of State Planning Studies, Ohio State Planning Board, August 1934, ch. V, p. 11.

⁹⁷ Preliminary Report of Oklahoma State Planning Board, September 1934, p. 99.

The Wisconsin State Planning Board reports⁶⁸ that since 1920 the number of miles of steam railroad in Wisconsin has declined. Between 1920 and 1932, approximately 555 miles were abandoned. Authentic and complete records of abandonments for the years prior to 1921 are nonexistent.

A number of State planning boards have recognized the desirability of studying proposed future abandonments to determine whether they are advisable. The railroads have requested permission to abandon 90 miles of lines in New Mexico,⁶⁹ and the State planning board is studying its desirability. The planning boards of Illinois¹ and Iowa² are engaged in similar studies, and the Missouri report points out that undoubtedly a considerable amount of railroad mileage can ultimately be abandoned in Missouri. Just how much mileage, and where, cannot be determined until there is more thorough knowledge of the total volume of traffic movement. The Oklahoma board³ points out that it has been recognized for many years that the uncontrolled pioneering and speculation in the early days of railroad building have resulted in much unnecessary duplication of service and the construction of many unprofitable lines. This situation, coupled with the advent of new competitive modes of transportation, is gradually but definitely bringing about a more widespread appreciation of the imperative need for a comprehensive plan as the basis for the consolidation and more systematic arrangement of the railroads throughout the country. The New Jersey State Planning Board⁴ declares that the multiplicity of railroad systems in the State is attended by unnecessary duplication of lines and services and by the inadequacies that result from insufficient coordination of both freight and passenger service, particularly at terminal points. In Kentucky⁵ the Bluegrass section and the western coal-field area are covered by a network of railroad lines not warranted by transportation demand and explainable only by motivations of competition.

The Idaho State Planning Board reports⁶ that in Idaho the railways with their branches reach every point of justifiable tonnage and many that do not warrant railway service. There are a number of railway branches that could be economically replaced by

highways. Some method of procedure should be developed for such exchanges, which will be beneficial to all concerned.

The tax situation created by the abandonment of railroad lines is a subject recommended for further study by the Maine State Planning Board.⁷ "Railroads are among the heaviest taxpayers", says the Kansas State Planning Board.⁸ "The menace to the State and counties in wholesale abandonment lies in the withdrawal of railroad property from the tax rolls without the substitution of property of equal value * * * Twenty-two counties in Kansas are already greatly affected. The sum of \$7,518,726 has already been withdrawn from the tax rolls and it is obvious that the counties must find some new source of revenue or curtail their expenditures. In most counties the proportion of all local taxes which the railroads contribute ranges from 10 to 20 percent and in one case is 28.9 percent of the total."

The Wisconsin Board⁹ recommends additional studies of railroad abandonments to discover whether truck and bus service has adequately substituted for railroad service in the regions where abandonments have occurred.

Railroad Consolidation

Closely related to questions of railroad-line abandonments are problems of railroad consolidation for economy and more effective service.

The Wisconsin regional plan considered matters of improvement of terminal facilities and railroad consolidations outside their legitimate field of study. Their report states:¹⁰

"An examination of Wisconsin's railroad facilities requires that a line be drawn between aspects of primary concern to the State and aspects that are obviously regional in character. For example, the matter of terminal facilities and their improvement, although highly important to the State, is essentially a problem that must be studied and solved locally. The matter of railroad consolidations, in contrast, involves such considerations as policy and financial structure of railroad systems whose lines traverse several States. Consolidations are, therefore, not matters falling within the scope of State control, nor can railroad consolidations be recommended without presumption."

On the other hand, the Illinois State Planning Consultant declares¹¹ that there are strong indications of the need for study to determine what public

⁶⁸ A Study of Wisconsin, Its Resources, Its Physical, Social, and Economic Background, Wisconsin Regional Planning Committee, December 1934, p. 370.

⁶⁹ Preliminary Report to National Resources Board, New Mexico State Planning Board, December 1934, pp. 136-137.

¹ Report of the Illinois State Planning Commission, December 1934, p. 83.

² A Report of Progress Iowa State Planning Board, September 1934, pp. 368-369.

³ Preliminary Report of Oklahoma State Planning Board, September 1934, p. 93.

⁴ A Preliminary Report on Planning Surveys and Planning Studies for the State of New Jersey, New Jersey State Planning Board, September 1934, p. 21.

⁵ Preliminary Report on Series of State Planning Studies, Kentucky State Planning Board, September 1934, ch. V., p. 15.

⁶ Six Months' Progress Report, Idaho State Planning Board, December 1934, exhibit F, pp. 4-5.

⁷ Maine State Planning, Three Months' Period Ending August 1934, p. 62.

⁸ Progress Report, Kansas State Planning Board, September 1934, pp. 108-109.

⁹ A Study of Wisconsin, Its Resources Physical, Social, and Economic Background, Wisconsin Regional Planning Committee, December 1934, p. 363.

¹⁰ Ibid, pp. 430-431.

¹¹ Report of the Illinois State Planning Commission, December 1934, p. 83.

advantages would result from consolidation of uneconomic competing lines. In the Pacific Northwest, where there are several competing parallel lines through the region, railroad unification is reported as probably especially important.¹² In northern Idaho¹³ there is a possibility of combining three railways into one, at least under the present traffic. At most, only two will be required under normal traffic conditions.

The South Dakota State Planning Board¹⁴ concurs in suggestions made by the South Dakota railroad commission that where little used lines parallel each other, one of the lines be abandoned and that joint operation of a single line, with use of only one station per town, be substituted. In Sioux Falls there are six roads with separate stations. One station could serve all roads. The sites of the present stations would be valuable for industrial uses. Somewhat similar conditions exist in eight other cities or towns. The adoption of these suggestions would eliminate a total of 12 passenger stations, 5 freight stations, and 5 combination freight and passenger stations in South Dakota.

Terminal problems are important in any consideration of possible consolidations. The Colorado State Planning Board reports¹⁵ that terminal facilities have been generally adequate in the State except in Denver. Here, they are adequate for the present volume of business but are reported to have been congested in the peak of 1928 and 1929.

Elimination of Grade Crossings

In studying the problem of eliminating railway-highway grade crossings, State Planning Boards have found it necessary to study other elements in addition to the existing grade crossings.

In some cases the abandonment of little used lines will be the most effective means of eliminating large numbers of grade crossings. The Arkansas report¹⁶ points out that many dead-end branch lines prevail throughout the State, particularly in the rugged areas. An examination of one of the plans discloses that there are 23 such lines. Frequency of service on these lines is very low and a number of the existing grade crossings occur along them. In other cases it may be possible to eliminate a substantial number of existing grade crossings through highway relocations. The possibility of doing this has been shown on the Colorado¹⁷

highway plan, which also shows the crossings where grade separations are urgently needed. The necessity of studying railroad and highway locations simultaneously in formulating a program for grade separations was emphasized by the Oklahoma State Planning Board as follows:¹⁸

"It is evident that a definite long-term program should be evolved for future grade separations, but this necessarily entails the preparation of comprehensive plans for both the railroads and the State highways. Undoubtedly, it would be found that through the comprehensive coordinated planning of highways and railroads certain adjustments could be made to eliminate many of the present crossings without the expense of building separations."

In California,¹⁹ the State railroad commission is carrying out, in its program of grade separations, a policy of State-wide significance, and one which requires a considerable degree of coordination. The Maine State Planning Board²⁰ has recommended that consideration be given to physical conditions surrounding grade crossings in order to develop a comprehensive improvement program.

Railroad Rates

Questions of railroad rates received consideration by at least two State Planning Boards. The consultant's report²¹ in the Pacific Northwest Region states that lower cost rail transportation through the Pacific Northwest Region is essential to general regional progress, including agricultural, forest, mineral, and other industrial and commercial development. The Minnesota State Planning Board²² considers questions of rate structure one of the remaining railroad problems which should receive serious consideration.

Management of Railroad Lands

The management of railroad lands comes in for consideration by the State Planning Board of Utah.²³ The railroads today still own 4.59 percent of the total area of the State. Most of this land is desert land which can be used only for grazing purposes. The scattered location of the holdings makes its administration very difficult. It will be to the advantage of the railroads as well as the Government to exchange scattered lands so as to group them together in larger tracts, the Utah Board concludes.

¹² Progress Report on Regional Planning, Pacific Northwest Regional Planning Board, January 1935, pp. 107-108.

¹³ Six Months' Progress Report, Idaho State Planning Board, December 1934, Exhibit F, p. 4.

¹⁴ Progress Report of the South Dakota Consultants to National Resources Board, South Dakota State Planning Board, March 1935, pp. 179-181.

¹⁵ Preliminary Report to the National Resources Board on State Planning in Colorado, Colorado State Planning Board, August 1934, p. 28.

¹⁶ Preliminary Report of Arkansas State Planning Board, September 1934, p. 229.

¹⁷ Preliminary Report to the National Resources Board on State Planning in Colorado, Colorado State Planning Board, August 1934, p. 28.

¹⁸ Preliminary Report of Oklahoma State Planning Board, September 1935, p. 100.

¹⁹ A Report to the National Resources Board on the Work of the California State Planning Board, December 1934, pp. 24-25.

²⁰ Maine State Planning, Three Months' Period Ending August 1934, Maine State Planning Board, p. 62.

²¹ Progress Report on Regional Planning, Pacific Northwest Regional Planning Board, January 1935, pp. 107-108.

²² Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. 1, p. 21.

²³ A State Plan for Utah, Progress Report, Utah State Planning Board, April 1935, p. 118.

Car Ferries

Car ferries are a special railroad problem which received consideration in the report of the Wisconsin Regional Plan Board.²⁴ Car-ferry transportation on the Great Lakes, particularly on Lake Michigan, is extensive and affords a means of saving time in transit, which becomes an important factor in the movement of many commodities. Tonnage moving by way of car ferry into or out of Wisconsin ports crosses Lake Michigan in from 4 to 6 hours and thus avoids the delays which would inevitably result if it were necessary to move the tonnage through the congested Chicago area.

Narrow-Gage Railroads

Southwestern Colorado²⁵ is still served by narrow-gage lines only. These lines are more than three times as expensive to operate as standard-gage lines, but do not handle enough traffic to justify the investment involved in converting them to standard gage, the board discovered.

Interurban Electric Lines

The electric railroad appeared at the turn of the century. It served as a connecting link between important cities and served the intervening population more conveniently than did the steam roads. Passenger traffic produced the greater proportion of revenue, but freight and express traffic were added in increasing amounts. The increased use of passenger automobiles, trucks, and busses spelled doom for a large proportion of the electric lines in the United States.

The Ohio State Planning Board²⁶ presents maps showing that the once flourishing system of electric interurban railways is no longer a factor in the State's transportation system.

The Indiana State Planning Board²⁷ reports a similarly rapid decline in the electric interurban systems, which has seriously affected public welfare. Tax returns have decreased and people have been thrown out of employment. Although the Indiana Board sees no hope of increasing the scope of operations of the electric interurban lines, it makes recommendations for the protection of the lines which are at present in operation. Cooperation with organized truck lines, reduction of passenger fares, utilization of modern equipment, and more rapid schedules will perhaps result in increased patronage.

In Pennsylvania²⁸ several of the electric interurban lines have held their places in recent years by improving their services. The Utah Planning Board²⁹ recognizes the electric line as much more flexible in operation than the steam line. They see advantages in its ability to give service directly to commercial districts of cities, and believe that it is to the interest of the people of the State to retain them and to promote their type of service rather than to curtail it.

Railroad Studies Undertaken or Suggested

Surveys of Existing Railroad Facilities

The Maine State Planning Board³⁰ prepared a map showing: (1) Steam railroads serving the State, both standard and narrow gage; (2) an important electric railroad handling a large amount of freight. Text accompanying the map gives total mileage of the different types and miles of railroads abandoned since 1916. Information for these studies was obtained from the Maine Public Utilities Commission. The South Dakota Board presented figures of the total railroad mileage in the State and the total assessed valuation of railroad properties in South Dakota³¹ in 1934, obtained from the 1934 report of the South Dakota Railroad Commission. Figures comparing the average railroad investment per ton loaded for the United States and for the Pacific coast States show that the latter States have a very heavy burden to carry.³² The North Dakota Planning Board³³ prepared a map showing areas which are 5, 10, and 20 miles and over from a railroad while the South Dakota consultants³⁴ presented a map showing approximate distances to the nearest railroad station, from which it is evident that large areas of the State lie more than 25 miles from a station. The Wisconsin Regional Planning Board³⁵ shows on a series of maps the correlation between railroad development and population in 1860, 1870, 1880, 1900, 1920, and 1930. The New Jersey Planning Board³⁶ prepared a map entitled "Transportation

²⁴ Preliminary Report to the Honorable Gifford Pinchot, Governor of the Commonwealth, and the National Resources Board, Pennsylvania State Planning Board, December 1934, p. 500.

²⁵ Preliminary Plan on Transportation, Utah State Planning Board, October 1934, p. 3.

²⁶ Report of Maine State Planning Board to the National Resources Board, Maine State Planning Board, March 1935, map 2-B-26, vol. I, no. 5.

²⁷ Progress Report of South Dakota Consultant to National Resources Board, South Dakota State Planning Board, April 1935, p. 177.

²⁸ Proceedings of the First Pacific Northwest Regional Planning Conference, Portland, Oreg., Mar. 5-7, 1934, Pacific Northwest Regional Planning Commission, pp. 104-105.

²⁹ Preliminary Report, North Dakota State Planning Board, April 1935, Transportation.

³⁰ Progress Report of South Dakota Consultants, South Dakota State Planning Board, April 1935, fig. 66, p. 184 c.

³¹ A study of Wisconsin, Its Resources Physical, Social and Economic Background Wisconsin Regional Planning Committee, 1934, pp. 371-376.

³² A Preliminary Report Upon Planning Surveys and Planning Studies for the State of New Jersey, New Jersey State Planning Board, September 1931, p. 23.

²⁴ A Study of Wisconsin, Its Resources, Physical, Social, and Economic Background, Wisconsin Regional Planning Committee, December 1931, p. 393.

²⁵ Preliminary Report to the National Resources Board on State Planning in Colorado, Colorado State Planning Board, August 1934, p. 23.

²⁶ Preliminary Report on a Series of State Planning Studies, Ohio State Planning Board, August 1934, ch. V, p. 12.

²⁷ Preliminary Report, Indiana State Planning Board, 1931, vol. II, appendix C, sec. II, pp. 40, 43, 44.

Facilities", showing: Railroad systems; number of tracks (indicated by varying weights of line); large freight classification yards (indicated by symbol); type of operation; terminals.

Highway-Railway Grade Crossing Studies

The Ohio State Planning Board ³⁷ prepared an exhibit showing the location of railroad grade crossings on State highways outside of municipalities. Data for these exhibits were obtained from the files of the bureau of bridges of the State highway department, which in 1927 made a survey of the physical conditions surrounding each crossing and is keeping this survey up to date.

The Ohio State Highway Department has rated the degree of dangerousness of grade crossings in the State. A sample rating sheet is given in appendix 6-A of the State plan report.³⁸ The board states ³⁹ that in developing the physical rating (a) the various combinations of approach alignments and grades were rated from the best to the worst by the assignment of numbers; (b) the various combinations of sight distances were also rated from the best to the worst and similarly numbered; and (c) the types of protection were also given numbered ratings from the best to the worst. These three ratings, each given a different weight, were combined to produce the composite rating, the crossing having the highest rating representing the one most in need of separation from the standpoint of physical conditions.

Railroad Traffic Studies

Not all State planning boards have been successful in securing the desirable records of traffic movement over the railroads of the State. The Missouri Board ⁴⁰ had inadequate opportunity and insufficient funds for comprehensive traffic counting, which they recognized as an outstanding need. A map in the report of the Maine State Planning Board ⁴¹ shows the passenger-train service afforded by the steam railroads in Maine. It indicates the number of trains operating weekly between the principal cities, as advertised in the winter service schedules for 1934-35. The map also shows the lines which have suspended passenger service dur-

ing the indicated season, and the names of the operating companies involved in railroad transportation.

The Ohio Board ⁴² secured information on railroad operations in the State during the week from July 1 to July 7, 1934, through a special survey conducted by all but one of the railroads. One exhibit shows the average daily number of passenger trains on the principal railroad lines; another, the average daily number of freight trains; a third shows the freight car interchange. This latter exhibit indicates the relative importance of the various railroad centers as interchange points and shows the importance of coal as a commodity in railroad traffic in the State. The great number of cars interchanged at such points as Cincinnati, Toledo, and Columbus suggests the necessity of coordinating the various elements of the railroad system and the need for reorganizing terminal facilities and improving terminal operations to secure substantial economy in railroad transportation.

The North Dakota studies ⁴³ of the origin and destination of railroad freight traffic show that approximately 70 percent of the traffic originating in the State is related to agriculture and that more than 90 percent of this traffic moves to points outside the State. On the other hand, less than 10 percent of the lignite coal moves to destinations outside of North Dakota.

Comparisons of Railway and Other Transportation Agencies

The Minnesota State Planning Board ⁴⁴ has shown graphically a series of statistics relating to railroad and auto transportation companies. The statistics were compiled from annual reports of the Minnesota Railroad and Warehouse Commission and from reports on file with that body. They were presented to show the gradual growth in the rail and auto transportation systems in Minnesota.

The Indiana board conducted a freight traffic survey to determine the varying degrees in which trucks, railroads, and express and forwarding companies are used by (1) heavy manufacturers and shippers; (2) light manufacturers and shippers; (3) wholesalers and retailers of large units; (4) wholesalers and retailers of small products; (5) mills and processors; (6) commodity shippers (coal-sand). Data for this study were obtained by personal contact.

³⁷ Preliminary Report on a Series of State Planning Studies, Ohio State Planning Board, August 1934, ch. VI, p. 3.

³⁸ Ibid, appendix 6-a.

³⁹ Ibid, ch. VI, p. 7.

⁴⁰ A State Plan for Missouri, Preliminary Report, Missouri State Planning Board, October 1934, p. 42.

⁴¹ Report of Maine State Planning Board to the National Resources Board, Maine State Planning Board, March 1935, map 2-B-51.

⁴² Preliminary Report on a Series of State Planning Studies, Ohio State Planning Board, August 1934, ch. V, pp. 13-16.

⁴³ Preliminary Report, North Dakota State Planning Board, 1935, Transportation, pp. 2-3.

⁴⁴ Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, p. 131.

OCEAN AND INLAND WATERWAYS AND PORTS

Every State possessing navigable waters bearing commerce has problems of waterway and port development which are completely interwoven with other problems of State planning. Railway and highway connections and relations, water-front industrial areas, housing for harbor workers, and combinations of commercial and recreational uses indicate a few of these relationships.

Ocean Ports

The Port Hinterland

The Pacific Northwest region, in a special study of the area tributary to ports, came to the conclusion that in that section of the country the area tributary to ports may vary from 50 miles to as much as 700 miles, depending upon the type of freight. For coastwise traffic the limit is about 50 miles. Any plans which will reduce transportation costs will extend the port tributary area and therefore the possible port business.

Federal, State, and Municipal Participation in Waterway Development

The United States Corps of Engineers has charge of ports and harbors and navigable waterways, and engages in such planning as relates to actual construction and maintenance of these facilities. This service has produced improvements of great value and importance to commercial and industrial interests.

The Maine State Planning Board⁴⁵ declares that the provision of waterside facilities and necessary improvements on land, in connection with waterway development, should be under public control of States and municipalities, working together, rather than left in the hands of private developers.

Ocean Waterways

Ocean waterways and ports have received varied treatment at the hands of the different State planning boards. In Florida,⁴⁶ the Public Works committee evolved what it considers an ideal harbor plan, specifically for the port of Miami, but one which can be adapted to any port in the State. In New Jersey,⁴⁷ port requirements appeared to be limited largely to maintenance and improvement of existing channels and ports.

The Pacific northwest region's study⁴⁸ of lumber ports is an example of the special port studies fre-

quently warranted. It was observed that the average cost per ton of commerce handled at the coast lumber ports was about 7 times the average cost for all harbors, and was particularly high for the Oregon ports. It became apparent, as the studies progressed, that the high costs of the latter are the result of providing numerous harbors in order to reduce the cost of hauling either logs to the mills or finished lumber to adjacent ports. The length of this coast, as a ship travels, is 300 miles; in this distance there are seven lumber ports south of the Columbia River. Studies indicate that there has not been a proper balance between cost of providing harbors and cost of hauling logs or lumber. If the development were being started anew, the number of harbors on the Oregon coast south of the Columbia River would probably be considerably less than the existing number.

In Rhode Island the emphasis on waterway and port development falls quite differently, as would be expected. Rhode Island recognizes its shores and rivers as one of its principal assets. Oil companies located on the shores of Narragansett Bay, pollution of rivers, and a general disregard for waterfront development have deprived the rivers and shores of much of their natural beauty and value. The board recommends⁴⁹ that plans be made for the conservation of waterways with regard to pollution, navigation, flood control, oyster beds, and fishing grounds, for curtailing further destruction of beauty, for reclaiming shores where possible, for stimulating improvements, and for developing parkways along the rivers which flow through industrial and slum districts.

Inland Waterways and Ports

Most of the State planning boards have attempted to determine the present and future values of waterways to the State and their relation to other transportation agencies.

Value of Inland Waterways to the States

"Water transportation", says the Missouri report, "is not now a factor of importance in the transportation system of Missouri. Despite the presence of two great rivers and the largest mileage of navigable waterways (850 miles) of any State in the Union, upon which the Federal Government has expended large sums of money, the volume of traffic is extremely small and there appears to be little immediate prospect of greatly increased volume."

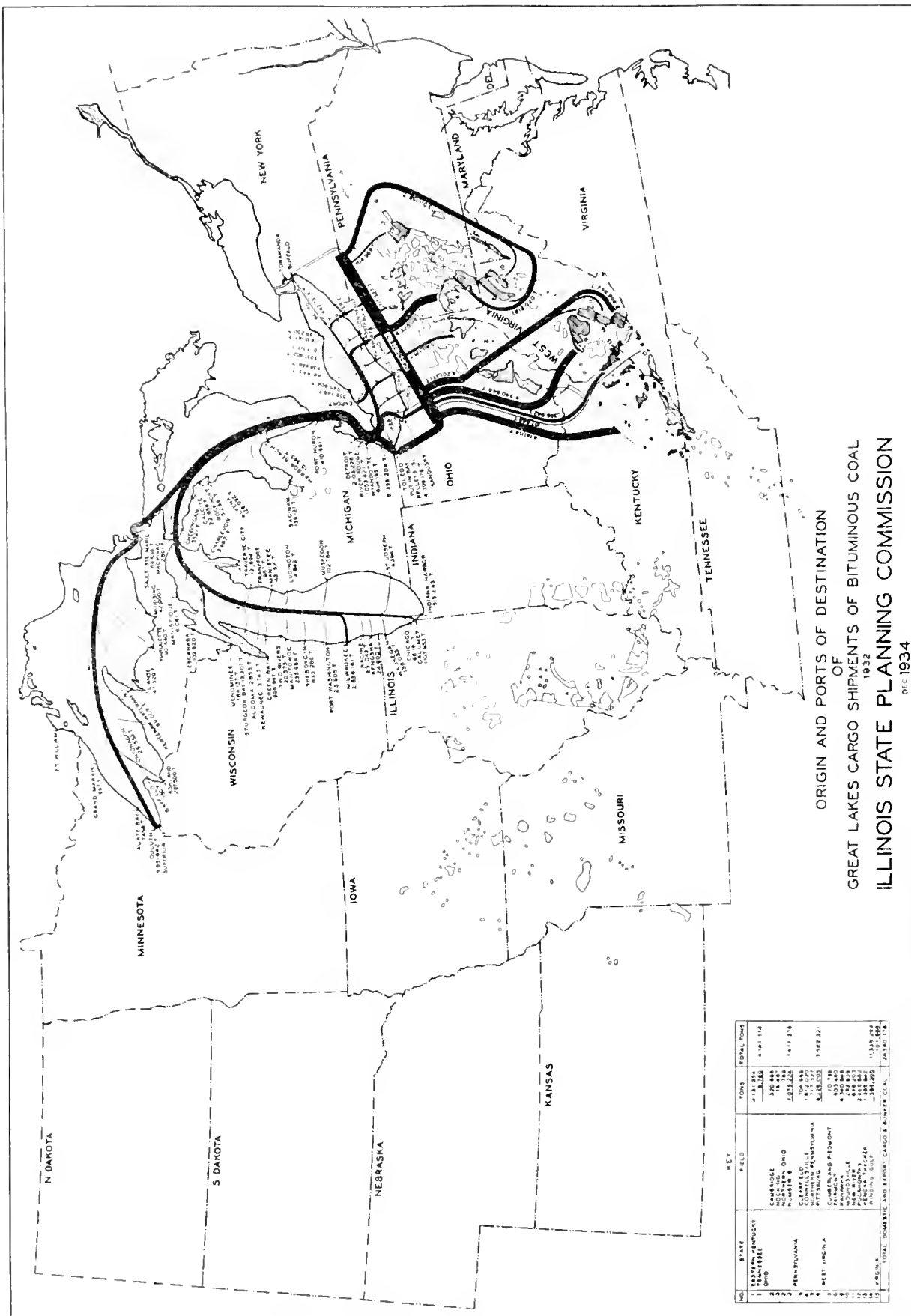
⁴⁵ Maine State Planning Report, Three Months' Period, ending August 1934, Maine State Planning Board, p. 71.

⁴⁶ Progress Report, Florida S. P. B., Dec. 31, 1934, p. 40.

⁴⁷ A Preliminary Report Upon Planning Surveys and Planning Studies for the State of New Jersey, New Jersey State Planning Board, September 1931, p. 22.

⁴⁸ Proceedings of the First Pacific Northwest Regional Planning Conference, Mar. 5-7, 1934, Pacific Northwest Regional Planning Commission, p. 104.

⁴⁹ Rhode Island Planning Board Report, March 1935, p. 3.



DATA FROM U.S. STATE GEOLOGICAL SURVEY, U.S. BUREAU OF MINES, AND U.S. ARMY CORPS OF ENGINEERS

From "Report of the Illinois State Planning Commission," December 1934.

Indiana reports⁵⁰ that "regardless of the almost gigantic efforts that have been made to protect and further develop this type of transportation (inland waterways), terrific inroads have been made by steam road operators and bus and truck line operators. These inroads have resulted primarily because of the higher type of efficiency offered by these other carriers, together with definite and rapid schedules and easier accessibility into the interior of the territories through which they operate."

The Iowa board recommends⁵¹ the following as the main waterways question to be studied by the transportation committee: "Will it pay Iowa shippers to use the waterways shipping facilities? And if so, what kinds of freight and how much will it pay to ship by water?"

The Kentucky Planning Consultant reports⁵² benefits resulting from inland waterway development, as follows:

"Both on the Ohio and its tributaries, canalization has made possible at almost all times the utilization of natural resources which might have not been economically feasible if dependent upon natural river conditions. Vast quantities of sand and gravel at many points on the Ohio, and rock asphalt on the Green and its tributaries are economically produced and transported."

The Minnesota State Planning Board⁵³ foresees new industries as a result of the completion of the 9-foot channel in the upper Mississippi Valley. It predicts that riverside elevators, packing houses, wholesale houses dealing in coffee and sugar and dealers in bulk consignments of lumber and coal will seek favorable locations at points of river-rail interchange. Likewise the development of the Great Lakes-St. Lawrence waterway may provide a stimulus both to industrial and agricultural development and to population movements, through the establishment of lower transportation charges.⁵⁴

The Wisconsin board believes that a continuous⁵⁵ all-water route to the Atlantic Ocean would unques-

tionably increase traffic far in excess of Wisconsin's present port facilities. Extensive expansion of docks, terminals, railroad yards, and communicating streets would become an immediate necessity. The board points out that the responsibility rests with each Wisconsin lake port city so to plan its growth that waterfront expansion remains practicable at all times.

The Pacific Northwest region⁵⁶ points out that "a system of trunk waterways is essential to the ultimate general development of the resources of the region. The waterways must be carefully considered in relation to other forms of transportation. The waterways alone do not solve the problem of economical transportation. They will bring about lower cost transportation, particularly for bulk freight, along certain limited trunk lines. Their traffic must depend in considerable part upon other transportation feeders. Rate structures, lines, equipment, and terminals must be planned for the economic interchange of traffic between rail and water, highway and water, and vice versa."

States which possess no navigable inland waterways have problems of stream control and development. This is illustrated in the case of Michigan, whose State planning board has reported⁵⁷ as follows:

"There are no rivers, inland from the improved 'mouths' and harbors on the Great Lakes, that are commercially navigable.

"A number of the important rivers of the State, in no sense now commercially navigable or ever likely to be so utilized, are classed as 'navigable' streams because of prior use which was for the most part logging use. These rivers remain under Federal jurisdiction as regards all changes and improvements such as dams, bridges, dredging, etc. Other rivers, not declared 'navigable', are under inadequate local supervision. A single, uniform, adequate supervision of all streams is a desirable objective."

Development Program

The Pacific Northwest region⁵⁸ has proposed a step by step plan which to them appears best suited to meet the needs of navigation of the tributary area in the Columbia and Snake River Basins.

⁵⁰ Preliminary Report, Indiana State Planning Board, 1934, vol. II, appendix C, sec. V, p. 75.

⁵¹ A Report of Progress of the Iowa State Planning Board, September 1934, p. 406.

⁵² Preliminary Report on a Series of State Planning Studies, Kentucky State Planning Board, September 1934, ch. V, p. 17.

⁵³ Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, pp. 139-140.

⁵⁴ Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. I, p. 22.

⁵⁵ Progress Report on Regional Planning, Pacific Northwest Regional Planning Board, January 1935, pp. 111-112.

⁵⁶ A Study of Wisconsin, Its Resources Physical, Social, and Economic Background, Wisconsin Regional Planning Committee, December 1934, p. 432.

⁵⁷ A Preliminary Report on State Planning, Michigan State Planning Commission, September 1934, Water Resources Appendix, Irrigation, p. 117.

⁵⁸ Report of Divisional Committee on Water Resources, Pacific Northwest Regional Planning Committee, December 1934, pp. 8-9.

AIRWAYS AND AIRPORTS

The long distances covered in a few hours by fast airplanes make the planning and development of major transcontinental air routes almost exclusively a national problem. The location and development of intrastate airways, of course, is a State or regional problem. Airports are usually provided by the individual communities or private organizations, but the State planning boards can furnish valuable guidance as to the location, size, and types of airports needed.

State Interest in Aviation

The amount of State interest in aviation varies greatly. New Mexico⁵⁹ and Missouri reported no special need for intrastate air routes but recognized the advantages of air travel for long trips to or from large cities outside the State. The Indiana Board⁶⁰ reports that in its opinion air transportation has not yet become a major factor in the transportation field. Frequent changes in the schedule of operations cause disturbances in shippers' plans, weather conditions still determine the certainty of movement, and often entire routes are altered on comparatively short notice. These factors, which are practically unknown in railroad operations, must be eliminated before any general acceptance by the public is possible. The Indiana Board⁶¹ recognizes the possibility of developing special types of airplane service such as a high-class freight service operating on flexible schedules and rendering service to manufacturers of such products as jewelry, medicine, and ready-to-wear garments.

On the other hand, some boards have found intrastate aviation extremely important, and are pushing forward plans for its further development. In California, the Army, Navy, and National Guard have aided in outlining a system of airways within the State which will meet the requirements of the services responsible for the defense of the coast. In Florida the recreational aspects of aviation are dominant, as they are in Maine and in Colorado. Many families from the warmer States spend the summer vacation season in Colorado. The heads of these families, who must remain at home for business reasons, are using air-travel facilities for frequent visits.

Idaho's rough topography makes State aviation particularly important. Travel distances within the State can be halved and the time can be quartered, when the airplane is used. Consequently, Idaho is systematically providing airports in anticipation of steadily increasing use of air transport. The major air-freight

service is to mines, which might otherwise be required to shut down during the winter. Planes delivering 50-pound ingots of gold are no exception at the Boise airport, nor is the flying of a 1,600-pound shaft to a mine, and the landing of it on the snow. The delivery of fuel oil has been accomplished in the same manner. The airplane has supplanted dog team mail service into many settlements. The most important use of the air service during hot months has been the transporting of men and equipment to fight forest fires. The airplane also has proved invaluable in carrying passengers, food, and mail into and out of flooded areas.

State planning boards have an opportunity to be of great service in the development of aviation. When a city decides to build an airport it immediately wants to know what kind of airport it should develop and what the probable future use of the airport will be. State planning boards are securing the information on which to base a logical and reasoned answer to these questions.

Information Needed

The report of the Pacific Northwest region⁶² points out that "there is a marked need for more widely understood national policies and plans for airway development with proper relationships to other forms of transportation, particularly highways and railways; for uniform control of airway development and airways by States; for the coordination of minor air routes across State and international lines; for the conservation of suitable airport and landing-field sites; for metropolitan studies for the economic location of airports, properly coordinated with other transportation terminals, with centers of population and with highways."

Development of Airports

The States which were particularly interested in air transport were almost unanimous in emphasizing the importance of proper airport development. A transportation medium is no better than its terminals. Minnesota and New Jersey are among the States stressing this point.

Distance from Population Centers

The importance of airport location, as it affects transportation costs and travel time, is emphasized by the California State Planning Board:⁶³ "Practically all of the airports serving the metropolitan areas are

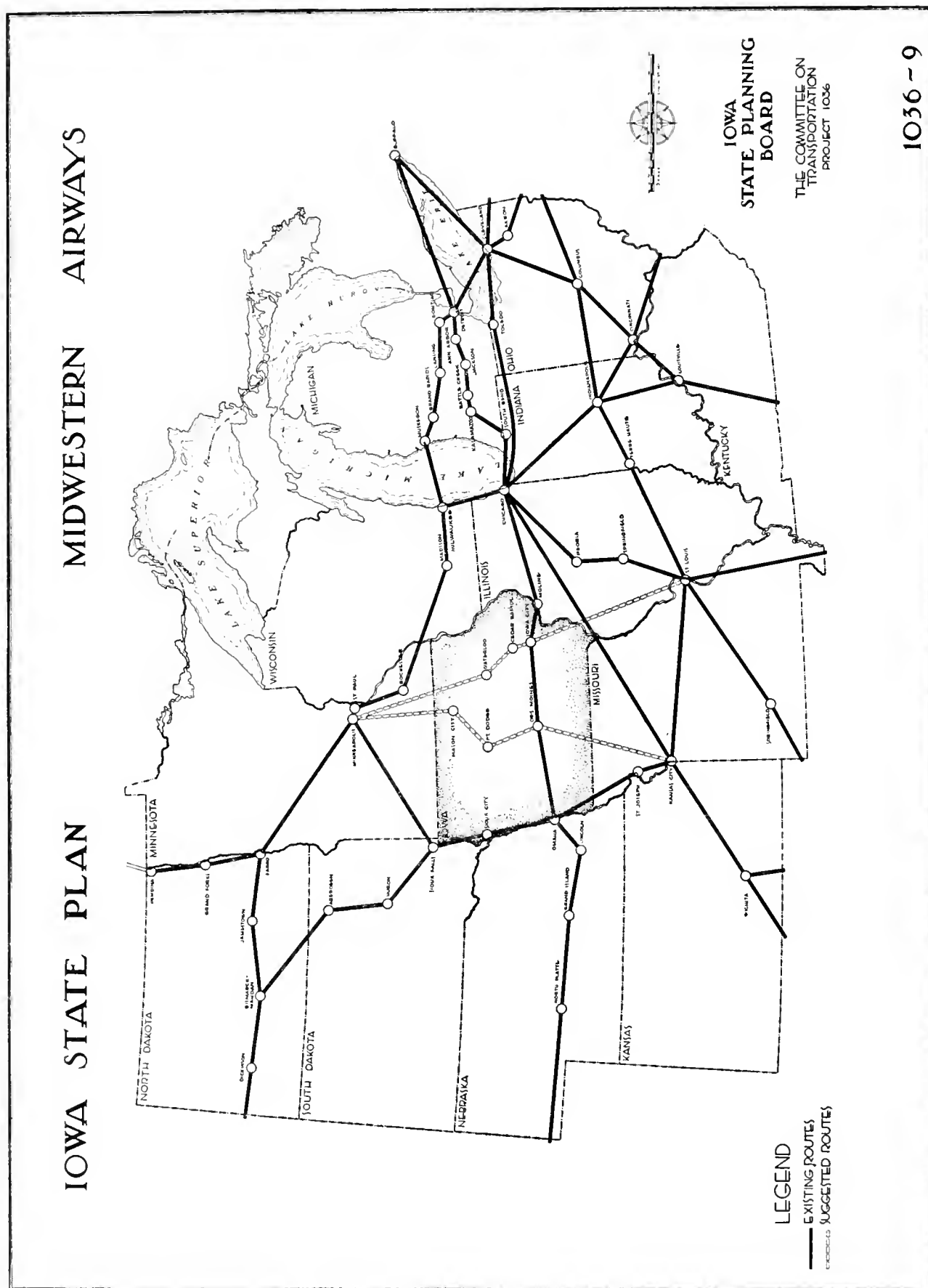
⁵⁹ Preliminary Report to National Resources Board, New Mexico State Planning Board, December 1934, p. 144.

⁶⁰ Preliminary Report, Indiana State Planning Board, 1934, vol. II, pp. 90-92.

⁶¹ Preliminary Report, Indiana State Planning Board, 1934, vol. II, p. 88.

⁶² Progress Report on Regional Planning, Pacific Northwest Regional Planning Commission, January 1935, p. 111.

⁶³ A report to the National Resources Board on the work of the California State Planning Board, December 1934, pp. 173-174.



too far from the centers of the populations which are expected to use them. This is a troublesome problem and like other planning considerations is most easily handled in the preventive stage. Communities which may reasonably be expected to grow and expand can anticipate their needs. Those already covering wide areas may have to increase appropriations for the necessary lands.

Ground Transport Costs

"The cost of transportation to and from the airports is controlled by distance, location with reference to highways leading directly to centers which passengers desire to reach, transit facilities, suburban service on nearby railroads, and like considerations. Unless airports are incorporated in comprehensive plans for the development of communities, ground transport costs tend to be excessive and there is loss of the trip time which the air service is intended to reduce to the minimum. Local short-distance flying is adversely affected."

PIPE LINES

Importance of Pipe Lines

The importance of pipe lines varies greatly in different States. In the Pacific Northwest they are largely local and not yet particularly important, but the board points out ⁶⁷ that it is not too soon to consider possible future developments of this method of fluid transportation and to study its relation to the other means of transportation and to future industrial and metropolitan development. On the other hand, in the State of Indiana ⁶⁸ there are 21 separate pipe-line companies, many of which operate both interstate and intrastate. In many instances these lines serve as contract carriers; that is, one of the lines may contract to transport oil produced by a company which does not own pipe-line facilities. In Iowa, three main trunk pipe lines extend entirely across the State. One of these transports gasoline and two carry natural gas. A number of stubs and branches from the natural gas lines have already been built to serve large and medium-sized towns within reach, and permits have been issued for a considerable number more. In addition, there are two main oil lines, from the Oklahoma fields to Chicago, across the extreme southeastern corner of the State. The total trunk pipe-line mileage in operation in Iowa in August 1934 was 1,536 miles; natural gas, 881 miles, with permits issued for 289 miles more; and gasoline,

Most of the State planning boards have prepared air maps showing the location of airports within the State.

Putting Air Transportation Plans Into Effect

Various suggestions have been made for putting air transportation plans into effect. In Minnesota, the State Aeronautical Commission is sponsoring the program for the development of airway terminals.⁶⁴ North Dakota recommends the establishment of such a commission.⁶⁵ The Wisconsin State Planning Board⁶⁶ has proposed the establishment of an aviation division within the State highway commission. The board proposes that gasoline taxes, now refunded on aviation gasoline, should be collected and allocated to the highway Commission for financing further airport development and regulation.

⁶⁴ Report of State Planning Board to National Resources Board, Minnesota State Planning Board, November 1934, pt. II, p. 113.

⁶⁵ Preliminary Report, North Dakota State Planning Board, Transportation and Air-Way Development Program, April 1935, p. 6.

⁶⁶ A Study of Wisconsin, Its Resources Physical, Social and Economic Background, Wisconsin Regional Planning Committee, December 1934, p. 425.

682 miles. In Pennsylvania,⁶⁹ as in Iowa, a majority of the lines in the State are parts of an interstate system. The Missouri Consultant reports a surprisingly large number of pipe lines in the State. Since Oklahoma ⁷⁰ has vast oil and gas resources, the pipe lines are naturally an important element of the State transportation system. According to the chief engineer of the State corporation commission the total cost of pipeline construction in the State of Oklahoma is estimated at approximately \$375,000,000, which exceeds the present value of the railroads in the State, estimated at about \$350,000,000. The oil pipe lines alone, including trunk and gathering lines, comprise a total of 26,250 miles.

Relation of Pipe Lines to Railroads

Pipe lines are competitors of railroads in two respects. In the first place, they transport oil and gasoline which were originally carried in tank cars, many of which are now lying idle. In the second place, they facilitate the substitution of petroleum fuel for coal so that the railroads now carry less coal than formerly.

Effect of Pipe Lines Upon the State

The immediate effect of pipe lines, according to the Indiana report,⁷¹ is to create unemployment, because

⁶⁷ Progress Report on Regional Planning, Pacific Northwest Regional Planning Committee, January 1935, p. 112.

⁶⁸ Preliminary Report, Indiana State Planning Board, 1934, vol. II, pp. 95-101.

⁶⁹ Preliminary Report to the Honorable Gifford Pinchot, Governor of the Commonwealth and the National Resources Board, Pennsylvania State Planning Board, December 1934, p. 495.

⁷⁰ Preliminary Report of Oklahoma State Planning Board, September 1934, p. 102.

⁷¹ Preliminary Report, Indiana State Planning Board, 1934, vol. II, p. 96.

fewer workers are required to transport a given amount of petroleum products. This is illustrated by one of the outstanding companies which employs within the State of Indiana only 12 people, and has a monthly pay roll of only \$1,200. Six of these men are employed as line walkers or inspectors, whose duties are to watch for possible leaks or breaks in the line. Six other men are employed in the operation of pumping stations, which are so constructed as almost to run themselves. In the case of the steam railroads, thousands of men and women are employed. Hundreds who were formerly employed in shops devoted to the building, maintenance, and repair of tank cars and loading docks have been added to the unemployed as a result of pipe-line operation. The communities have lost the benefit of the distribution of the wages which the workers were formerly paid. The Iowa board⁷² recognizes these same difficulties but points out that by promoting the development of Iowa manufacturing and other industries, pipe lines may operate to increase both the amount and the value per unit of weight of manufactured and other industrial and commercial products.

Regulation of Pipe Lines

At present, pipe lines are less strictly regulated than are the railroads and less than the generally proposed

⁷² A Report of Progress of the Iowa State Planning Board, September 1934, pp. 418-419.

regulation of highway trucks and busses. Consequently, they pay less taxes, on the whole. The taxes they do pay, according to the Indiana report,⁷³ are largely real-estate and property taxes rather than taxes upon the product carried, which, in Indiana, is estimated to amount to millions of gallons daily. The counties and States through which these lines operate do not profit in any way on the gross volume moved, as they do in the case of products carried by steam railroads, which pay ton-mile taxes by counties.

The Indiana report⁷⁴ recommends that immediate steps be taken by properly constituted authorities of the State of Indiana to devise ways and means to bring about adequate, proper, and consistent regulation of pipe line operating companies, placing them upon an economic parity with other forms of transportation.

Information Needed

Information is needed, not only as to existing and proposed pipe lines and their capacities but also as to the probable effects and probable permanency of the lines, and the part they play in a comprehensive, coordinated transportation system.

⁷³ Preliminary Report, Indiana State Planning Board, 1934, vol. 11, pp. 95, 96.

⁷⁴ Preliminary Report, Indiana State Planning Board, 1934, vol. 11, pp. 98, 99.

COMMUNICATION LINES

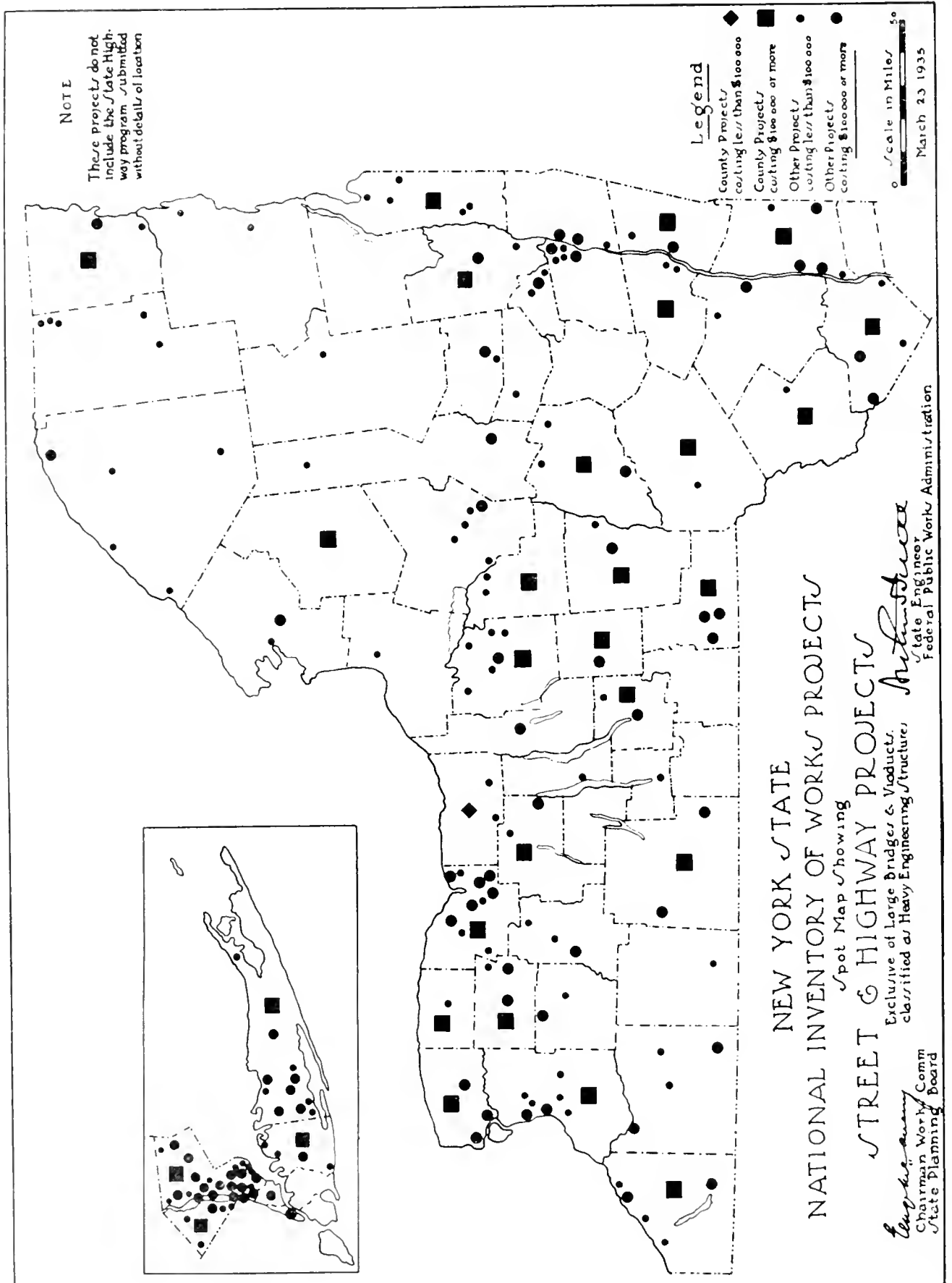
Very little attention has been given by State planning boards to the subject of communication lines—telephone, telegraph, and radio. One of the few studies was made by the Connecticut board,⁷⁵ which surveyed trends in communication as related to population changes.

Consideration might well be given to the possibility of establishing "communication corridors" through urban areas in which all types of transportation and communications by rail, highway, pipe lines, power transmission lines, and telephone and telegraph cables may be combined in a single, wide right-of-way. Within this corridor each individual facility could be given space at far less cost than if the agency respon-

sible for each one had to acquire its own separate right-of-way.

Suggesting standard locations for utilities may well be undertaken by a planning board. The Chicago Regional Planning Association has developed some valuable standards of this character. The Board of Underground Construction in the District of Columbia has a very complete recording system for existing structures and regulations governing new construction. The city planning division of the American Society of Civil Engineers has had for several years a committee on the location of underground utilities working on a manual on this subject which they call Subterranean Planning. Such structures as sewers, water mains, gas lines, steam mains, electric conduits, and telephone cables are all involved in this problem.

⁷⁵ A Condensed Report on Planning for Connecticut, Connecticut State Planning Board, October 1934, p. 58.



7. PUBLIC IMPROVEMENT PROGRAMS AND PUBLIC BUILDINGS

The National Resources Board in its report to President Roosevelt in December 1934 recommended the adoption of a permanent policy of long-range public-works planning by Federal, State, and local governments.

During the past 18 months the Board and its predecessor, the National Planning Board, have encouraged State planning by lending technical consultants and otherwise cooperating with qualified State planning boards which made application for such assistance and met certain reasonable requirements. The Board suggested that special attention be given to public-works programs, and pointed out, in its fifth circular letter of December 11, 1933, that State planning boards were in a position to render immediate aid to State and regional Public Works Administration officials in the formulation of long-range public-works programs. The letter suggested, also, that the boards might render valuable assistance in testing the worth of proposed projects, reconciling conflicts, coordinating activities of governmental agencies, eliminating duplications, and adjusting the distribution of projects to the unemployment needs.

Pursuant to these suggestions, a number of State planning boards collected essential data and formulated both long-term and immediate emergency programs of public improvement projects. These programs were of material assistance to State relief administrators in providing work for the unemployed on useful projects.

National Inventory of Works Projects

The existence and availability of such public-improvement programs by States suggested to the advisory committee of the National Resources Board the possibility of assembling reliable data on needed improvements for the entire United States. A quick inventory of desirable public works appeared necessary in the formulation of the national program of useful work relief urged by President Roosevelt in his message to Congress on January 4, 1935. Accordingly, upon recommendation of the advisory committee, Secretary of the Interior Ickes as chairman of the National Resources Board on January 10, 1935, requested the State planning boards to cooperate in a national inventory of works projects. The chairman proposed that State planning boards, or special-works committees of such boards, serve in an advisory capacity, as did the Public Works Administration State advisory boards

during the early months of the Public Works Administration. The aim was to obtain before March 1, 1935, comprehensive lists of available projects which would have the double virtue of offering wide employment, and of contributing to the planned development of the States.

The necessary schedules, questionnaires, and instructions were prepared and distributed. State planning boards, their consultants, and the Public Works Administration State engineers were asked to organize immediately for the Nation-wide inventory and to collaborate directly in the conduct of it.

Sources of Data and Methods of Obtaining Them

Essential information was obtained from various official and private sources throughout the States. The Tennessee State Planning Commission, for instance, sent schedules to all county officials, city officials, State departments, State offices of Federal agencies, and various private and semipublic corporations and institutions including private colleges and secondary schools. Responses were received from approximately 90 percent of the agencies consulted. Desirable works projects suggested by the housing and rural-electrification surveys of the Tennessee State Emergency Relief Administration were added.¹

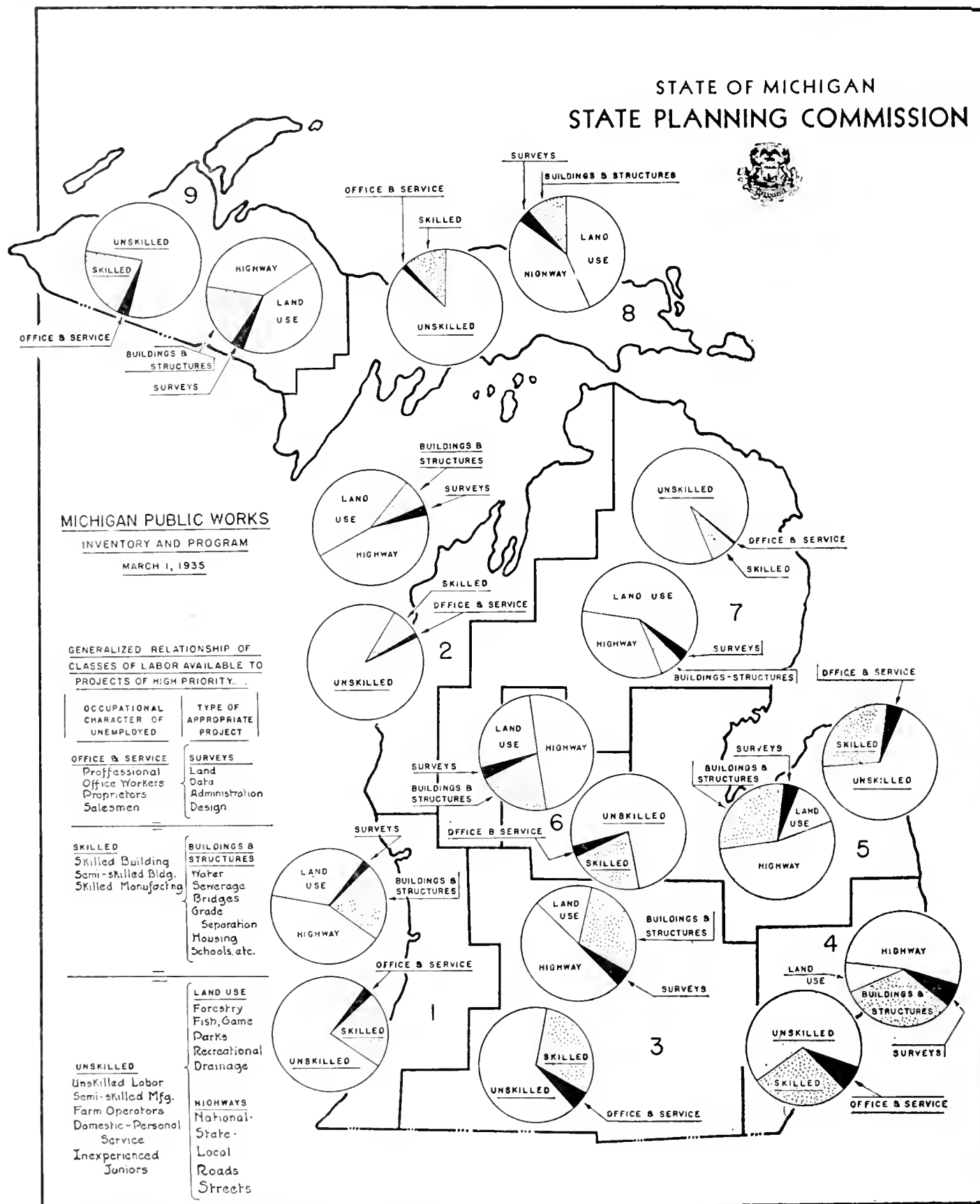
The limited personnel available to the Kansas Public Works Administration State engineer and to the State planning board did not permit extensive field contacts in the short time allotted for the survey.² To overcome this difficulty the State planning board, through the State chamber of commerce, called a meeting of local secretaries and municipal and county officials. To this group of about 150 persons, the purpose of the public-works survey and the contemplated procedure were explained. The Kansas State Planning Board believes that this meeting was an important factor in the success of the inventory.

In making an earlier inventory of public improvements needed over a 10-year period, the Kentucky State Planning Board, with the cooperation of the Kentucky Municipal League and the State Emergency Relief Administration, sent questionnaires to 132 communities with a population of 1,000 or more and to 120 counties.³ Local officials were assisted in answering the questionnaires by the field consultant of the

¹ Inventory of Public Works Projects for State of Tennessee—Recapitulation prepared for the State Planning Commission, March 1935, pp. 1, 2, 3.

² Second Progress Report, March 1935, Inventory of Public Works, p. xxi.

³ Preliminary Report on a Series of State Planning Studies, Sept. 1934, Page VIII-2.



From "Michigan Public Works Inventory and Program", March 1, 1935.

American Municipal Association and the county assignment officers of the State Emergency Relief Administration. The following three types of information were sought: (1) The financial condition of the community; (2) the record of public improvements completed within the past 10 years; and (3) needed and desirable public improvements which might be undertaken within the next 10 years; in the order of their urgency.

Procedure After Return of Questionnaires

After the returns from the questionnaires were in, the State planning boards eliminated duplications and evaluated the projects. In the latter task the Kansas State Planning Board secured the cooperation of various State agencies. For example, the chief engineer of the State board of health inspected proposals for water-supply and sewerage projects, and the State highway department evaluated proposals for streets and highways.⁴

The New York State Planning Board recommends the following course of action after the completion of a public-works inventory: ⁵ (1) Increasing and maintaining contacts with all local planning boards; (2) a State-wide analysis of the various groups of proposed public works; (3) the fitting of the individual works projects into the State plan; (4) careful study of the inventory in order that the State Planning Board may assist Federal Works Administrations to formulate projects worthy of Federal financial support.

Findings of the National Inventory of Works Projects

The national inventory of works projects has provided, for immediate governmental use and for future reference, a valuable record of useful and desirable State and local works projects.

Throughout the entire country 21,200 units reported 137,400 State and local projects with an estimated total cost of \$20,336,500,000. The total estimated cost of all projects in the inventory is divided among the different types of projects as follows: Streets and highways, 22 percent; reclamation, flood control, and water power, 14.5 percent; water supply and sanitation, 11.5 percent; buildings other than schools, 9 percent; heavy engineering structures such as bridges, tunnels, wharves, and transit projects, 8 percent; transportation facilities, 7.7 percent; schools, 6.6 percent; grade-crossing eliminations, 5 percent; various other utilities, 4 percent; recreation, 3.2 percent; miscellaneous projects such as aviation, water navigation aids, pest and disease control, fire protection, mapping surveys, and planning projects, 8.5 percent.

Comprehensive Planning—An Essential Aid in Public Works Inventory

The Pacific Northwest Regional Planning Board points out that from the experiences of State Planning Boards in taking the national inventory of works projects it has become increasingly evident that comprehensive planning is essential in the formulation of a sound program of public improvements. These programs should be intimately related to physical, economic, and social development.⁶

If there is no guiding plan, a public-improvement program tends to become merely an aggregation of unrelated items; broadly conceived projects, such as the development of the resources of an entire drainage basin for water supply, power, navigation, irrigation, and flood control, or the development of a unified regional transportation system, are likely to be overlooked.⁷ The Ohio State Planning Board found its State planning studies of great value in judging and selecting specific works projects in various classes.⁸ The Board believes that the inactivity of local planning organizations and the lack of cooperation between them and the local and State administrations largely account for the failure of some counties to participate in the public-works allotments to the extent of their comparative requirements.⁹

Local planning, as well as State planning, is necessary, for after comprehensive plans have been completed local planning boards can contribute intimate knowledge of local conditions, trends, and requirements. Thus, improperly planned and improperly located projects, which will be regretted in a few years, can be avoided.¹⁰

To gain these advantages, the Kansas State Planning Board encouraged county planning and the preparation of well-considered county-wide improvement programs. The Geary County (Kans.) planning committee, composed of interested citizens, formulated a 20-year plan of improvements to be carried out by Federal, State, county, town, and township agencies in the county. The committee's purpose was "to work out such a plan of public improvements as may eventually bring about a coordination of effort between the various political subdivisions to the end that all public works in the county shall be built economically, properly located, and be permanently adequate both in design and util-

⁴ Progress Report, January 1934 to January 1935, Vol. 1, pp. 123, 121.

⁵ Ibid.

⁶ Report on State Planning during the Period of August 1934 to March 1935, p. 336.

⁷ Preliminary Report on a Series of State Planning Studies, Ohio State Planning Board, Aug. 15, 1934, Chap. X, p. 10.

⁸ Public Works Inventory and Program, Michigan State Planning Commission, Mar. 1, 1935, pp. 7, 8.

⁴ Second Progress Report, March 1935, *Inventory of Public Works*, p. xxi.

⁵ *Public Works Inventory*, April 1935, p. 6.

ity."¹¹ A 25-year plan for Shawnee County, Kans., was sponsored and prepared cooperatively by the Kansas State Planning Board, the Topeka Chamber of Commerce, and the Topeka Engineers Club. The report of the study states that it is not a complete county plan but is a foundation upon which such a plan may be built. Many of the county officers change each year, but it is believed this plan will assure continuity in public-works development.¹²

The New York State Planning Board reports that the national inventory of works projects has brought forcibly to the attention of municipal and county officials the advantages of city and regional planning in developing their programs for public works,¹³ while the California State Planning Board observes that local interest in planning and in planning agencies has been aroused by the requirements that projects submitted for grants under the Public Works Administration be checked against local, city, and county plans.¹⁴ The New Jersey State Planning Board, having compiled on one map the public improvement proposals throughout the State, demonstrated a substantial amount of duplication and lack of coordination due to the absence of a comprehensive, unified, State plan.¹⁵

Public Works Criteria

The Kentucky State Planning Report points out that specific criteria for judging public-improvement projects are particularly important if there are no State or community plans upon which a public works program can be based.¹⁶

Criteria Recommended by National Resources Board

The National Resources Board, in its December 1934 report, recommended consideration of the following criteria for public works:¹⁷ Balance between expenditures for several kinds of public works; service standards for their operation; relative importance of essential services; cost; need and expected benefit of individual projects in relation to and in consideration of all other needed improvements; trends and growth and development potentialities; emergency need of a particular project; and its economic and social desirability.

¹¹ *The Next Twenty Years*, A report of the Geary County Planning Committee, contained in the Second Progress Report of the Kansas State Planning Board, March 1935, p. 1.

¹² *A Twenty-Five Year Plan for Shawnee County and the City of Topeka*, A Report to the Kansas State Planning Board, June 1935, p. 2.

¹³ *Public Works Inventory*, April 1935, p. 5.

¹⁴ A Report to the National Resources Board on the Work of the California State Planning Board, January to December, 1934, p. 16.

¹⁵ Preliminary Report, March 1935, Vol. II, p. 12.

¹⁶ Preliminary Report on a Series of State Planning Studies, Sept. 1934, p. V111-2.

¹⁷ National Resources Board Report, Dec. 1, 1934, p. 43.

Additional Recommended Criteria

The Pacific Northwest Regional Planning Board encouraged the application of the following additional tests and criteria, which were promulgated by the Public Works Administration:¹⁸ (1) Conformity to local, State, or regional plans so far as these have been developed; (2) the immediate emergency need and value for reemployment; (3) technical and functional soundness; (4) financial soundness, including financial value to locality or governmental agency, and self-liquidating features; and (5) legal and administrative soundness, such as freedom from restrictions of law, ownership, and jurisdiction.

The Michigan State Planning Board gives preference to public-works projects which provide maximum employment, develop the national resources of the State, are of permanent value, and are needed and useful.¹⁹

The Colorado State Planning Commission checked public-works projects to determine whether they were urgently needed and whether they would provide unemployment relief.²⁰

The North Dakota State Planning Board, in evaluating projects, has checked their urgency, direct and indirect expected benefits, and the ratio of cost to population and unemployment.²¹ For example, when requests for projects came from areas in which population is declining, the board endeavored to determine whether the population decline is caused by the depletion of natural resources and, if so, whether the proposed projects will conserve the remaining resources or make possible the development of new resources.

Lack of adequate criteria for evaluating public works has been responsible for the fact that certain kinds of public works have enjoyed public attention and approval at the expense of other types. The Kansas State Planning Board has observed that the people of Kansas generally consider highways, flood control, water conservation, and lake building the most essential types of public improvements, whereas an equally important need, not so generally recognized, is a long-term building-construction program for State office buildings and educational, eleemosynary, and penal institutions.²²

Public Works and Unemployment

The location of public-works projects where unemployment is greatest has been named as one of the tests

¹⁸ Progress Report, January 1934 to January 1935, pp. 122, 123.

¹⁹ *Public Works Inventory and Program*, Mar. 1, 1935, p. 2.

²⁰ Preliminary Report to the National Resources Board on State Planning, For the Six Months Ending Aug. 21, 1934, p. 182.

²¹ Preliminary Report, April 1935, *Public Works*, p. 5.

²² Progress Report, Sept. 1934, p. 148.

of the suitability of a project. In order to make certain that projects were so located the State Planning Boards were requested to obtain from the State relief administrators the latest figures on unemployment and relief loads in the political unit reporting. Some of the boards compiled this information graphically on an outline map of the State, to aid in visualizing the correlation between the distribution of unemployment and available public-works projects.

The Michigan State Planning Commission, assisted by the State emergency relief administration, took a census of the unemployed by occupation and by location, dividing the State for these purposes, into nine regions.²³ The commission is endeavoring to keep this information up to date in order that it may continuously coordinate public works and available labor. The commission aims to adopt a public-improvement program which will not encourage the unemployed to remain in localities or in occupations in which there are only slight chances for future employment in private industry.²⁴

Improvement Program Financing

Apportionment of Costs Among Governmental Units

In preparing the national inventory of works projects the State Planning Boards were asked to estimate what proportion of the cost of each project could be financed with other than Federal funds.

The Oregon State Planning Council had already made such a study. Since Federal lands comprise approximately 50 percent of the total land area in Oregon and since approximately 40 percent of the standing timber in the State grows in national forests, it seems reasonable to the council that, on the average, 50 percent of future public-works construction in Oregon should be financed by the Federal Government.²⁵ Approximately 48 percent of the funds spent for public construction in Oregon during the last 15 years have been supplied by the Federal Government. Accordingly, the council recommended the apportionment of financial contributions for public works in the State as follows: Federal, 45 to 55 percent; State, 15 to 20 percent; counties, school districts, and other local bodies, 25 to 35 percent.²⁶

As the public works inventory returns for each Tennessee County were completed, the Tennessee State Planning Commission recommended the proportion of the cost of each project that could be financed with non-Federal funds.²⁷ These recommendations were

based upon as careful an analysis of the financial conditions of the governmental units as the limited time and available data would permit.

The Michigan State Planning Commission has pointed out that the financial restrictions under which State and local governments operate frequently render impossible any extensive participation in public-works programs which are dependent upon local financing.²⁸ The Commission believes that these local financial limitations cannot be readily removed but must be faced as practical obstacles to public-works financing. Any program, directed toward the immediate relief of unemployment, which does not take these obstacles into account can enjoy only limited success. This was illustrated in Ohio where the State Planning Board found that 37 counties, containing 22 percent of the State's population, had had no allotments from the Public Works Administration.²⁹ Several of these counties were financially unable to pay their share of the costs, as required by the Public Works Administration. The citizens of some of the others failed to approve bond issues for financing their share of the costs.

Long-Term Programs Can Reduce Expenditures

The New Hampshire State Planning Commission Consultant attributes illogical and unbalanced expenditures of State public works funds in the past to three principal factors: ³⁰ (1) the segregation of State activities in separate departments, (2) lack of comprehensive data upon which to base adequate programs, and (3) lack of coordinating agencies. State planning boards, with their long-term improvement programs, can substantially eliminate, or at least minimize, these difficulties. The New England Regional Planning Commission has warned against the improper use of long-term plans as a reason for finding new public revenues rather than as a guide for the expenditure of available funds.³¹

The Maine State Planning Board points out that the long-term public-works program permits expansion of a budget system of financial control to include contemplated capital expenditures over a period of years.³² Thus, public works expenditures can be kept within the limits of financial ability to meet them. Furthermore, the available funds will not be used for piecemeal, poorly considered undertakings but will be reserved for the essential elements of the planned program.

²³ Public Works Inventory and Program, Mar. 1, 1935, p. 2.

²⁴ *Ibid.*, p. 11.

²⁵ A Study of Construction, Past Construction Expenditures, Present Allotments for Public Works and Employment of Construction Workers, January 1935, p. 12.

²⁶ *Ibid.*, p. 13.

²⁷ Inventory of Public Works Projects for State of Tennessee, Recapitulation prepared for the State Planning Commission, March 1935, p. 3.

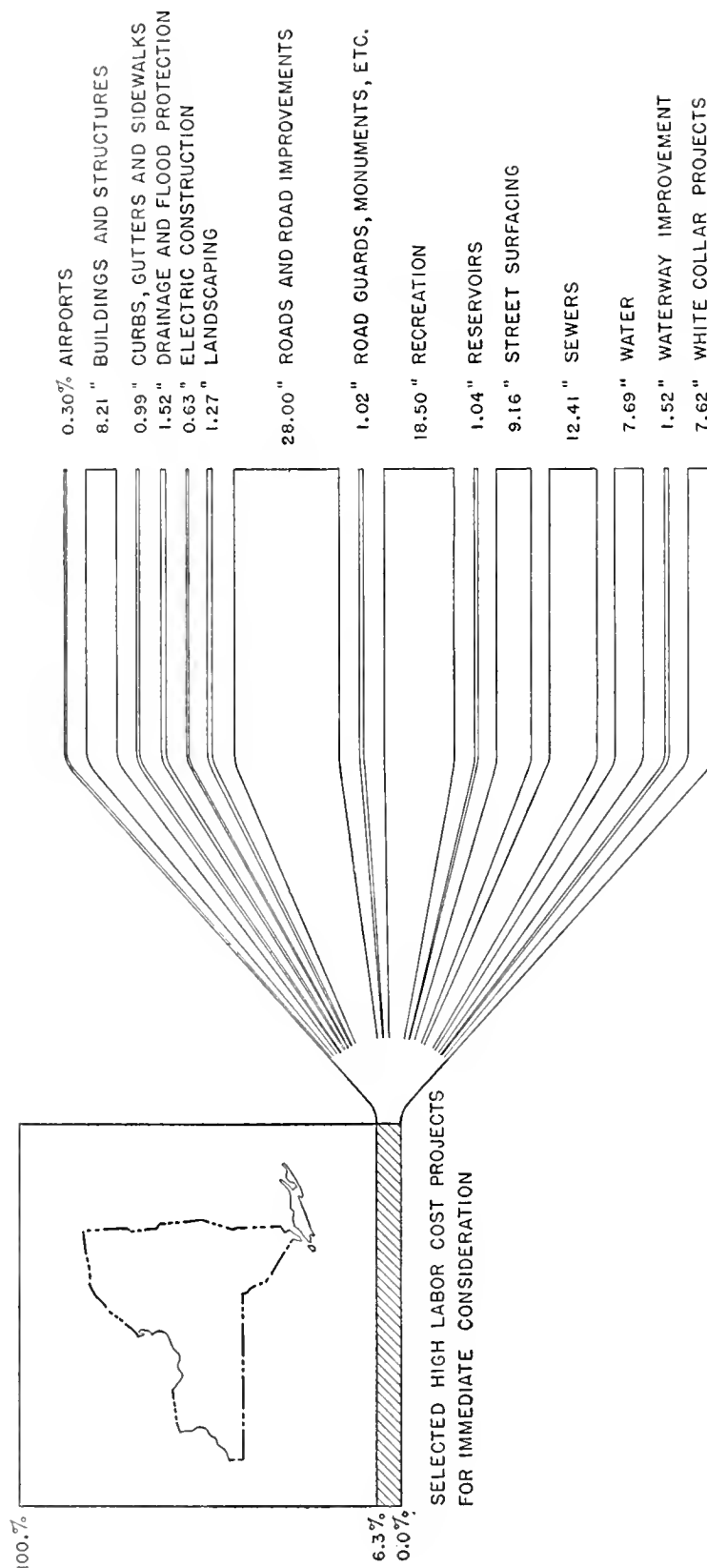
²⁸ Public Works Inventory, Mar. 1, 1935, p. 2.

²⁹ Preliminary Report on a Series of State Planning Studies, August 1934, Chap. X, p. 8.

³⁰ State Planning, Mar. 15, 1935, p. 99.

³¹ A Plan for Progress Report to the National Resources Board, April to October 1934, p. 5.

³² State Planning, Three Months' Period Ending Aug. 20, 1934, p. 16.



NATIONAL INVENTORY OF WORKS PROJECTS FOR NEW YORK STATE

ANALYSIS OF PROJECTS OF COMPARATIVELY HIGH LABOR COST

PREPARED FROM DATA SUPPLIED BY NEW YORK STATE PLANNING BOARD

PUBLIC BUILDINGS

A considerable portion of the annual expenditures for public-capital improvements is regularly devoted to the construction of public buildings. To prevent inefficiency and waste, more than 20 State planning boards, have, during the past year, undertaken extensive public building studies.

While notable progress toward a planned public-building program was reported in several States,³³ much yet remains to be done. Inadequate ground areas, inappropriate locations, poor arrangement, makeshift expansions, overcrowding, social inequalities, high cost of operation and other failings are reported evident in virtually every State.

Public buildings were discussed by the State boards under six general groupings, according to their intended uses: (1) Schools, libraries, and museums; (2) hospitals (3) eleemosynary institutions; (4) penal and correctional institutions; (5) buildings for public service and recreation; and (6) governmental administrative offices and buildings housing governmental operations such as airports and power plants. In considering public-building programs, the State planning boards have had in mind the achievement of a reasonable, socially equitable balance between these and other public works, in view of the total amount of available money. Neglect of this consideration in the past has too often resulted in a disproportionate development of certain types of State services and facilities at the expense of others no less necessary. Balance cannot be attained, however, by portioning out money to various types of programs according to some arithmetical formula.

Investigations by State planning boards have revealed that overdevelopment of one class of public buildings often exists in the same locality with painful lack of facilities in another class. Too frequently well-paid and well-qualified teachers may mean more to a State educational system than monumental school buildings; on the other hand, money spent on preventives such as recreational facilities and sanitary, pleasant living environment may offer greater values than money spent on correctional institutions, hospitals, and jails.

In any survey of public-building projects with the purpose of determining standards of service upon which to base recommendations, two steps appear to be essential: First, an inventory of existing services and facilities must be made, and second, an examination of possible future demands for these services.

Increase or decrease in the numbers of school children in certain age groupings, and other population characteristics are matters which have been investi-

gated in planning for public buildings. Changing population patterns demand relocation of buildings; the continued effectiveness of public-health measures may indicate changed or special types of hospitalization needs; the large numbers of persons in older age groups, together with continued economic maladjustment, may place a heavier burden upon eleemosynary institutions; long depleted purchasing power on the part of a large percentage of the population, combined with continued undesirable environmental conditions, probably will increase the burden upon correctional and penal institutions.

All these factors, and others like them, are considered by State planning boards in studies of long-range public building construction programs designed to substitute economy and order for waste and chaos by the gradual and systematic amelioration of existing poor conditions.

Educational Facilities

Public Schools³⁴

The establishment, control, and support of public schools is a responsibility of the States, but has been largely delegated to local school units, or districts, which may comprise a county, a township, a city, a village, or may embrace an area not related geographically to any other governmental unit. These are generally known as "common school districts", and each usually possesses its own school directors, or boards of education, who are empowered to establish and maintain schools, employ teachers, control debts, and levy taxes. The State departments of education usually confine themselves to fixing categorical standards regarding qualifications of teachers, curriculum, length of school term, and type of the school plant itself. Local school districts in the past have usually furnished most of the funds for support of the schools, but lately have been accepting a larger and larger percentage from the State.

Broadly speaking, our school systems have developed through local initiative, and their nature and development have depended upon the financial, social, and physical conditions of separate geographical districts, so that American schools are said to be more nearly the result of a process of natural social development than the schools of any other nation. Today the American school system is made up of 127,000 school

³⁴ A great part of the information, standards, and statistics presented in this section was obtained from a special report submitted by Mr. Earl O. Mills, Consultant to the Arkansas State Planning Board. Mr. Mills quotes freely from "Satisfactory Local School Units, Field Study No. 7, 1934" by Howard A. Dawson, Director of Information and Research, Arkansas State Department of Education.

³³ Indiana, Kansas, Kentucky, Maine, Michigan, New Mexico, New York, Pennsylvania, and Wisconsin.

boards scattered throughout the country, each operating almost independently of all others.

The great varieties of organization used by these boards have made the analyses of administrative policies difficult. Engelhardt and Zeigel, of the faculty of Columbia University,³⁵ have pointed out that factors such as improved highways, changes in means of transportation, social movements affecting population growth and modern methods of industry and trade are constantly changing the population patterns of a State. These, in turn, are continually changing the physical characteristics of the school districts.

The consequences of the natural, or unplanned, growth of school districts has been that they have been created without regard to proper limitation of area, general organization of administrative units, and school population to be served. It is estimated that the school districts are directly controlled by about 424,000 school board members. In 10 States there are actually more school board members than there are teachers, and for the entire country there are half as many board members as there are teaching positions. In area, these districts vary from less than 1 square mile to nearly 8,000 square miles, while the district school population ranges from less than a half dozen children in rural districts to a million or more in some of the largest cities.

Various State planning boards, considering the problem of planning buildings for a complex public school system, have recommended and undertaken surveys of existing services and facilities, and areas served, in order to obtain data for a comprehensive study of the school systems in the State. The scope of the studies varied with the resources and personnel available to the boards.

In Idaho,³⁶ for instance, where a successful study on this subject was instituted, the State planning board stated its purpose was to "determine the adequacy of the present school buildings, grounds, and equipment for carrying on a modern educational program including community activities, adult education, nursery school activities, health service and modern class room and playground activities; and to project a 10-year school building program on the basis of the reorganization of school attendance units."

In general, the studies proposed and undertaken in whole or in part by the various State planning boards are aimed to reveal the adequacy of the present buildings as judged by standards pertaining to location, lighting, heating and ventilation, toilets and sanitary facilities, safety, and room appointments. The present school grounds have been judged on the bases of size,

location, type of soil, drainage, landscaping and playground facilities. School equipment and apparatus have been surveyed for adequacy of seating, instructional apparatus, library, playground and recreational facilities.

Capital-outlay requirements of a future building program were considered in the same studies. In most instances, recommendations for such programs were based upon the number and size of buildings needed, and the customary unit costs of school buildings of various sizes in the areas affected. This procedure involved studies of possible reorganization, consolidation, and relocation of school administration areas and school buildings. Such plans required the determination of the number of children of different age groups (where enumerations of children of school age were not required by State law), the making of maps showing highways, topographical conditions and school population distribution, the boundaries of desirable attendance districts, and possible locations for future school buildings.

In order to obtain the maximum information for the effort and money expended, the assistance of State departments of education (where these existed), county, city, and district school boards and school superintendents was solicited in preparing and making the surveys.

The Kansas State Planning Board,³⁷ using labor obtained from relief rolls, undertook in November 1934, a survey of the physical condition of school buildings and grounds in cities in a certain population class, and in the rural districts of the State. It was thought this survey would provide data on physical conditions which would assist in evaluating proposals already made pertaining to consolidation, cooperative action, or State aid for school districts. The detailed information tabulated from the surveys of 8,217 school districts was made immediately available to the supervisor of engineering of the Kansas Emergency Relief Committee. Through that agency the material will be transmitted to the local county poor commissioners with the suggestion that they cooperate with the county school superintendents in the formulation of work projects to improve the conditions disclosed. In this undertaking, the Kansas State Planning Board enjoys the cooperation of the State Superintendent of Public Instruction, the departments of education of the State schools and the Kansas Teachers Association.

The Ohio State Planning Board,³⁸ in cooperation with the Bureau of Educational Research at the Ohio State University and the State Department of Education, has instituted two such studies. One of these is a

³⁵ District Organization and Secondary Education Bulletin No. 17, United States Office of Education.

³⁶ Progress Report, Idaho State Planning Board, December 1934, pp. 6 and 7.

³⁷ Report on "Rural Schools in Kansas", March 1935, p. 1.

³⁸ Preliminary Report, August 1934, ch. VIII, p. 2. Progress Report, March 1935, pp. 293-294.

cursory survey of school-building requirements of the 2,007 school districts in the State. The total estimated costs for all needed new buildings, additions, and remodelling as appraised by local authorities, and which would likely be needed in the next 5 years, was estimated at \$64,378,458. The other was a series of type studies for the planning of school-building facilities in six widely different counties. These studies are intended to produce detailed plans adjusted to the physical, economic, and social conditions that characterized the counties studied, to serve as models for other counties in the State, and as a basis for possible legislation requiring school-plant planning by counties.

The New Hampshire State Planning Commission Consultant³⁹ has pointed out that there still are too many one-room schools, many of them in sections of the State where consolidation might well be effected to improve the school standards and to lower the general costs of construction. There is a study now in progress under the direction of the Iowa State Planning Board⁴⁰ to determine in which communities of the State it is possible to close the one-room rural schools and transport the pupils to larger centers without increasing cost. This problem is not confined to these two States alone. A report of the National Conference on Financing of Education (Sept. 10, 1933) has recommended abandoning 150,000 one-room rural schools in favor of centralized school plants.

In many instances the rural school, besides serving educational needs, acts as a political and social center for the community, and so has a strong place in the sentiments of the people. These circumstances have impeded school consolidation where other conditions favored it. Recognizing these conditions, the 1935 Kansas State legislature enacted a law which permits school boards, by sharing expenses, to maintain one school, serving several districts, but permits the boards to retain their separate identities. It has been estimated that even if only moderate advantage is taken of this law, annual savings of more than \$500,000 will result to local tax payers.

The New Jersey State Planning Board⁴¹ has made an extensive inquiry into the educational facilities of that State. The board has concluded that two general lacks in public school service have special regional or State-wide significance. These are adequate service to rural areas, and efficient and economical distribution of high schools. In connection with the first lack, it was noted that excessive costs of adequate school service in sparsely settled and poor townships presented still another problem. Possibly in many of these cases a

varying degree of relief may be obtainable through school consolidation, and State purchase and depopulation of submarginal areas. The actual extent to which, from a regional point of view, there has been unnecessary duplication of high-school facilities in the State can only be determined by more exhaustive study.

The New York State Planning Board⁴² has observed that in one county composed largely of submarginal farm areas, the average cost per pupil in 20 "one-teacher" schools was \$162. For "one-teacher" schools outside of the submarginal area it was only \$92. Under the system of State aid, the State pays about 87 percent of the school costs in these 20 districts. If this submarginal land were purchased for reforestation or other public purposes, these 20 schools could be abandoned with a considerable savings to the taxpayers of the State.

An example of reorganization that may be effected to reduce the number of small, inefficient local units is presented in the State-wide program for the consolidation of schools in Arkansas.⁴³ Detailed studies of possible consolidation have shown that the number of schools for white children could be reduced from 4,198 to 2,658; the number of "one-teacher" schools from 2,495 to 473, and the number of "two-teacher" schools from 920 to 478. It was further shown that approximately 75 percent of all children could be placed in schools having four or more teachers. Much progress has already been made in the program and the number of schools has been materially reduced.

There are other factors besides those mentioned which affect a public-school program. The Wisconsin Regional Plan Committee⁴⁴ has stated that necessary information is not available concerning the extent to which private elementary schools are assuming the educational burden in Wisconsin. Lack of such information makes it difficult to plan a public-school program for a long future period.

Because of declining birth rates, new construction to take care of additional child population during the next 10 years appears to be much less than during the past 20 years. The New Jersey State Planning Board has commented upon this fact in its efforts to indicate the probable trend of new school construction. New high-school building construction probably will be needed for some years, however.

Colleges and Universities

State owned or supported institutions of higher learning, such as universities, colleges, and normal schools, are in general conveniently situated, notwith-

³⁹ "State Planning in New Hampshire", Mar. 15, 1935, p. 2.

⁴⁰ "Report of Progress", September 1934, p. 300.

⁴¹ Preliminary Report. Mar. 30, 1935, pp. 45-48.

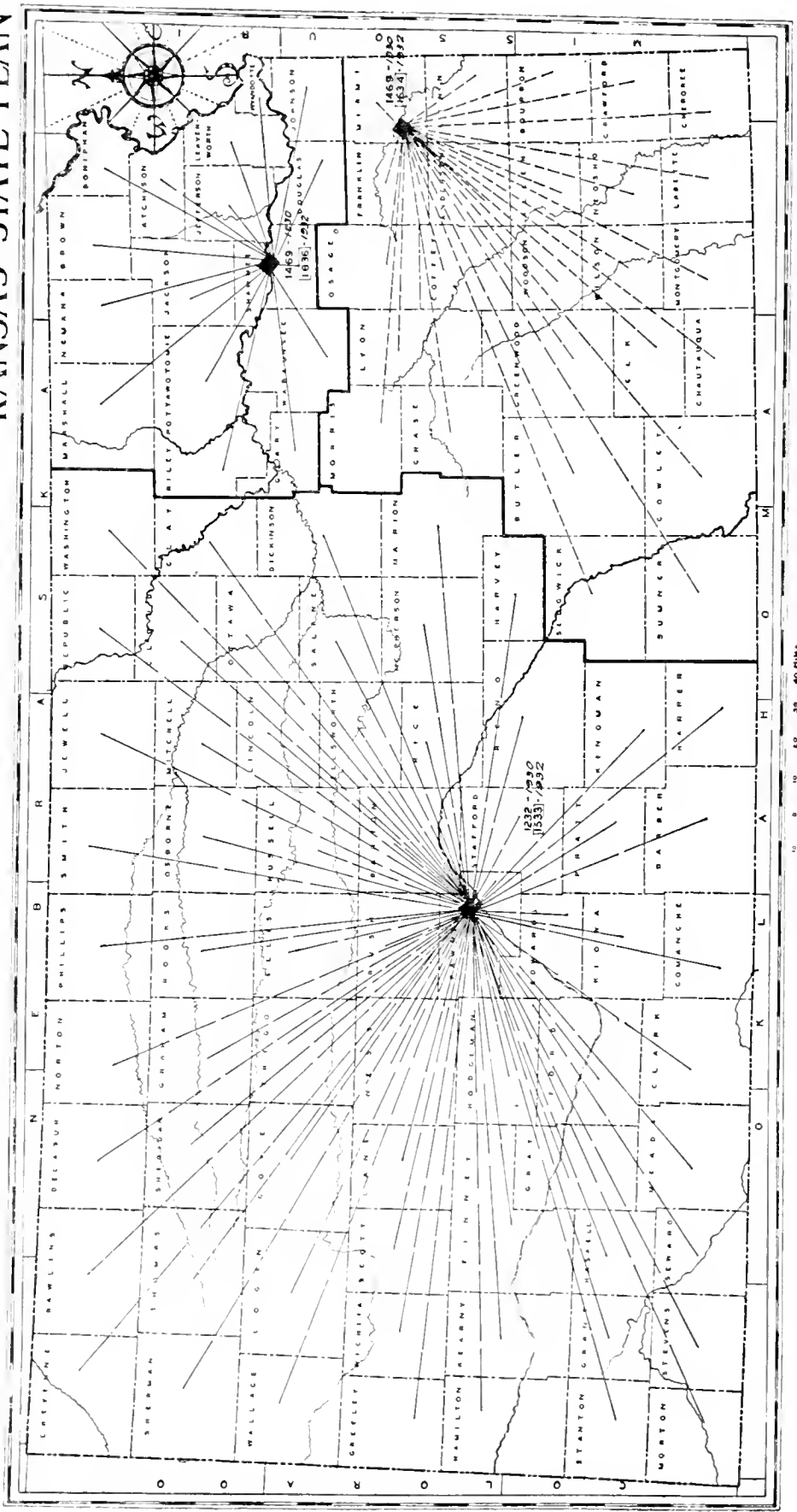
⁴² Summary Report to Governor Lehman, January 1935, p. 29.

⁴³ Special report by Earl O. Mills, State consultant.

⁴⁴ Regional Plan Report, 1934, p. 127.

HOSPITALS FOR THE INSANE

KANSAS STATE PLAN



LEGEND
———TOPEKA HOSPITAL
———LAWRENCE HOSPITAL
———OSAWATIMIE HOSPITAL

DIVISION OF PATIENTS
A SUGGESTED DIVISION OF PATIENTS TO ALLOW FOR EQUAL CAPACITY AT ALL STATE HOSPITALS

KANSAS
STATE PLANNING BOARD

From "Progress Report—September 1934."

standing changes in population distribution since their establishment. In some instances, however, the sites early selected for these institutions, based on the convenience of the then existing population, are far removed from the centers of population they are now serving.

Reports of State planning boards indicate that the merit of the policy of governing each institution through a separate board of trustees working independently of other similar institutions within the State, is open to reasonable and serious doubt. When this practice is viewed from the consideration of State welfare, among other inconsistencies made apparent is the lack of coordination of the services rendered and the manner in which funds are allotted for their support. Appropriations often are made by State legislatures upon the basis of apparent need as evidenced by interested group, rather than upon legitimate requirements or the need for a balanced educational system. Obviously this arrangement cannot long survive if equitable and adequate opportunities are to be afforded in the State educational institutions at a minimum cost to the taxpayers. There must be a more definite coordination and integration of these facilities and services which should be founded upon a modern balanced educational system and a long range physical and financial plan.

Public Institutions

Welfare

Public-welfare activities are now a standard function of State government. State welfare departments have assumed the responsibilities of the State governments in the field of social welfare, and, to a degree, have adopted the field and objectives of private social work. Forty-three States now have departments in which the public welfare activities of their respective State governments have been centralized. The States usually have made the welfare departments responsible for all public activities on behalf of the dependent and delinquent, the criminal, those needing special treatment for mental disorders or mental deficiency, and the physically handicapped.

The Kansas State Planning Board⁴⁵ has recommended the enactment of a law establishing a State public welfare administration. Under the proposed law, all public welfare work in Kansas as well as the institutions now controlled by the board of administration would be placed under the supervision of a board of public welfare.

Planning for public welfare institutions involves a preliminary study of past expenditures, proposed ex-

penditures, inmate population, and inmate capacity of each institution. Such studies have been made by the State Planning Boards of Maine⁴⁶ and Minnesota.⁴⁷ Constructive programs of public welfare activities have been sponsored by several State planning boards.⁴⁸

Hospitals

Hospital buildings under State public welfare administration include those of a general nature, usually capable of caring for all cases, those for the treatment of mental diseases, those for children, tubercular cases, and for special types of treatment. The Maine State Planning Board⁴⁹ in its study of hospitals stressed the following factors: The location and classification, the type of control, the construction, the territory served, the operating personnel, the type of patients, the equipment, and the capacity.

While usually in urban areas general hospital facilities are readily accessible to the population, districts which are strictly rural in character have few if any hospital facilities. As a consequence health problems become acute for a lack of hospitalization which local communities are financially unable to afford. The Missouri State Planning Report⁵⁰ has especially noted this condition and finds that measures to improve similar conditions in other parts of the country by the maintenance of State owned or supervised institutions have always encountered opposition.

Eleemosynary institutions constitute a wide field in which State planning efforts are needed. These institutions afford services and facilities for the care of the dependent, aged, deaf, blind, crippled, orphaned, and the infirm. Consolidation may be affected in many cases to reduce unnecessary costs of operating eleemosynary institutions, with an increase in efficiency. The Indiana State Planning Board⁵¹ studied the practicability of consolidating into fewer units the county infirmaries in that State.

Correctional Institutions

Recent disorders in penal and correctional institutions in the country have served to focus attention upon the problems of our prison population.

Administrative Buildings

The increased assumption by State and Federal Governments of new responsibilities in recent years has created a need for more building facilities to house the administrative functions.

⁴⁵ Report, March 1935, pp. 8 and 9.

⁴⁶ Report, pt. II, October 1934, p. 225.

⁴⁷ Kansas—Progress Report, 1934, p. 40, New Jersey Preliminary Report, pp. 34-36. Maine, Report, March 1935, p. 7-B-21, Wisconsin Regional Planning 1934, p. 147.

⁴⁸ Report, March 1935, p. 7-B-21.

⁴⁹ Preliminary Report, 1934, p. 49.

⁵¹ Preliminary Report, Indiana State Planning Board, 1934. Vol. 2, p. 7.

⁴⁵ Progress Report. September 1934, p. 40.

Considerable pertinent information already has been published regarding the economy, efficiency and attractiveness to be achieved by grouping State buildings, with the capitol as the nucleus, and some notable examples are now to be found in a few of the State capitals. The New Mexico State planning Board reported that a study has been made of proposals for new State buildings. The board recommended that the work be coordinated with a development scheme for a capital building group. Subsequently a State capital group in keeping with the landscape of New Mexico ⁵² was recommended.

In the spring of 1935, Governor Martin requested the Oregon State Planning Board, through its Public Works Committee, to make a study of a new capitol group. At a meeting held March 25, 1935, the Board formally approved the study. By a coincidence, on April 25, just one month later, the old capitol was destroyed by fire. This regrettable event did, however, provide a compensation in that the study group was thus enabled to plan with fewer restrictions.

A comprehensive study of the many factors involved in planning for a new State capitol, the relationship of the capitol to other facilities and functions of the

State and the determination of location, site, historical background, general architectural considerations, size, cost, financing and other related problems seems particularly appropriate as a function of a State Planning Board.

When the proper consideration is given to future land uses, population distribution, county consolidations, and efficient administration of local subdivisions, it is probable that State planning boards will need to study the problems imposed by possible relocation and modernization of county courthouses and their accessory buildings.

In view of the many independent institutions controlled and maintained by separate State boards and the evident need of coordination between them, there is perhaps no greater opportunity for effective achievements for the social and economic advancement of the State than through a closer relation and more efficient operation of public institutions. The Kentucky State Planning Consultant ⁵³ reports attempts to effect co-operation between the various State institutions in their requests for operating budgets for the coming fiscal years.

⁵² Preliminary Report, December 1934, pp. 162-172.

⁵³ Preliminary Report, September 1934, p. 9.

8. SOCIAL AND ECONOMIC TRENDS

Social and economic problems differ from State to State,¹ and even within States,² depending on the existence and use of natural resources. Consequently the State Planning Boards have made a wide variety of studies which usually reflect the particular industrial, agricultural, and commercial maladjustments from which they suffer.

Reporting a series of such studies, the New Jersey State Planning Board³ states that its first object was to assemble and present a clear and well-rounded picture of social, economic, and physical conditions and trends within the State, both as an essential to planning a well-balanced program of development and as a service to the several state departments and agencies in their individual planning and programming activities.

In Iowa the State Planning Board conducted a series of special studies⁴ "to determine how Iowa people live, as contrasted to how they make their living, and to discover the extent to which Iowa communities discharge their functions as social units." The ultimate objective of these studies was, however, to formulate plans for the enrichment of human life through "(1) the development of community consciousness and morale (2) the promotion of recreational and leisure time activities, and (3) the extension of opportunities for social participation among all of the people."

Similarly, the Connecticut State Planning Board made studies of two groups of selected towns in that State.⁵ These were detailed social surveys of distribution of farm and village families, relief cases and their disposition, economic classification of homes, social institutions, transportation, occupations, industry, population mobility, and land use.

In Pennsylvania the State Planning Board has made a systematic effort to measure the State's resources for satisfying "human needs", and the extent to which such needs are now being met. In its preliminary report the board states:⁶ "In the United States the words 'human needs' connote more than the bare

necessities to sustain a miserable existence. So, in classifying them for Pennsylvanians, a reasonable standard of living has been kept in mind. Human needs, then, are such essentials as food, shelter, clothing, health protection and at least that minimum of recreation and amusement requisite for well being and comfort. They include the means for education, transportation, and other services and goods in adequate quantity to satisfy the reasonable desires of the average individual and the average family. They stop far short of extravagances. In other words, they constitute an 'American standard' of living."

In its studies of the general living standards of the people of Pennsylvania, the board discovered that:⁷ "Approximately 9 in every 10 of Pennsylvania's families had incomes, even in 1929, that were inadequate for the complete attainment of reasonable comfort. In fact, many did not have enough for their basic needs. The average income was sufficient to buy only three-fourths of the things regarded as vital for an American standard of living.

"Moreover, the standard of living of these and other families today is lower than in 1929.

"Pennsylvania's income in 1929 was between 7½ and 8 billion dollars, according to estimates based on totals for the United States, which were prepared by various agencies. A study of expenditures by the people of the State for clothing, food, rent, transportation, recreation, amusements, health, and other things led to the conclusion that the State's income was, in round figures, 7½ billion dollars."

The Missouri State Planning Board selected a "few typical counties" for a thorough study of all important "physical, social, and economic conditions."⁸ The result of the study, the Consultant believes, should be "enlightening and suggestive of measures which are needed to effect ultimate economies and improved standards of living."

Most boards are agreed that the economic security of the people depends increasingly upon opportunities for industrial employment. The Indiana State Planning Board gave particular attention to the possibility of introducing new industries which would utilize more of the natural resources peculiar to that State.⁹

¹ Public Works Inventory and Program, Mar. 1, 1935, Michigan State Planning Commission, p. 10.

² Preliminary Report, 1934, Missouri State Planning Board, pp. 72, 73.

³ Preliminary Report, Mar. 30, 1935, New Jersey State Planning Board, vol. II, pp. 9 and 12.

⁴ Iowa State Planning Board Report, April 1935, pt. 3, p. 22.

⁵ Condensed report on planning for Connecticut State Planning Board, July 1934, p. 57.

⁶ Pennsylvania State Planning Board, Preliminary Report, December 1934, p. 285.

⁷ Pennsylvania State Planning Board, Preliminary Report, December 1934, p. 284.

⁸ Preliminary Report, 1934, Missouri State Planning Board, pp. 72, 73.

⁹ Preliminary Report, 1934, Indiana State Planning Board, p. 162.

As the Indiana Board stated: "It is fundamental that an essential remedy for inferior living conditions is the guarantee of adequate employment which will provide

sufficient income with which to secure living conditions of an acceptable standard.¹⁰

¹⁰ A Report of the Consultants of the State Planning Board of Indiana, for the period ending Feb. 22, 1935, p. 12.

OCCUPATIONAL AND EMPLOYMENT TRENDS

Changes and trends in occupations and employment in any State vary most directly with the changing status of the productive industries within its borders. In Pennsylvania, for example, the State Planning Board found ¹¹ that manufacturing can no longer be depended upon to absorb a constantly increasing number of workers, and that employment in mining also probably will continue to decline because of the difficulties that industry is now experiencing. It, therefore, states its belief that in the absence of increasing opportunity of employment in these industries, the worker must turn to the service occupations for employment.

The Pennsylvania Board also reports ¹² a condition of insecurity and instability among persons now employed, due "to a large extent to the fact that Pennsylvania labor legislation is not adequate to cope with existing conditions. Many of these (labor) laws require amendments or additions; some need extensive revision; practically all of them should be re-read and reconsidered in the light of conditions with which the Commonwealth must deal during and after the current depression."

In order that Pennsylvania's workers in the future may be assured of some economic security and stability, the board recommended "changes in the laws, which would contribute materially to the progress Pennsylvania must make for the greater economic welfare of its working population". These changes may be summarized as follows:

1. Further means of preventing accidents, particularly in the anthracite mining industry.
2. Prohibition of the employment of children under 16 years of age and the regulation of conditions of employment for all minors under 18 years of age.
3. Establishment of a shorter work week.
4. Creation of minimum wage standards.
5. Compulsory regular payment of wages earned and authorization of the department of labor and industry to assist workers in the collection of back wages due.

¹¹ Pennsylvania State Planning Board, Preliminary Report, December 1934, p. 448.

¹² Pennsylvania State Planning Board, Preliminary Report, December 1934, pp. 345, 346.

6. Encouragement of genuine collective bargaining on terms of employment between organizations of employers and organizations of employees.

7. Elimination of the use of privately paid or company-controlled police officers, particularly in connection with labor disputes, as recommended by the commission on special policing in industry.

In New Jersey,¹³ a special field survey of employment and of distribution trends of manufacturing industries of the State was made by the State Planning Board during 1934, and estimates of facts bearing upon the balance of employment capacity of the plants were based upon the records and reports of the State Department of Labor and of the Bureau of the Census. The board discovered that while the United States Census of Manufacturers indicates an "increase in adjusted value of manufacturing products, from 1919 to 1930, of more than 91 percent", employment capacity in the State showed "insignificant gain." A net gain for the State (between 1918 and 1934) of 1,900 plants was paralleled by an increase in employment capacity of only 6,000.¹⁴ Also the board observed that "agriculture as an employment factor has fallen into relative insignificance."¹⁵

However, in South Dakota, the State Planning Board states:¹⁶ "More than half of the gainful workers of the State are engaged in agricultural pursuits. Increased employment in other occupations will occur when agriculture is rehabilitated but not before. Therefore the first step in furthering employment and industry must be to improve agricultural conditions.

"South Dakota manufacturing has shown a steady development during the last 30 years and this trend may reasonably be expected to continue for the next decade or longer. A westward migration of manufacturing has been apparent since 1914 and this migration may be expected to influence South Dakota more during the immediate future."

¹³ Preliminary Report, Mar. 30, 1935. New Jersey State Planning Board, vol. II, p. 53.

¹⁴ Ibid, pp. 56-58.

¹⁵ Ibid, p. 50.

¹⁶ Progress Report, Mar. 15, 1935, pp. 205, 206.

There has been a considerable change in the occupations of the people of Texas, according to the planning board of that State, not only in the number of people actually engaged in the various occupations, but also in occupations themselves.¹⁷ The board believes the change is partly due to scientific developments and to the more intensive development of Texas as a whole. There have been large consistent gains in the number of persons in manufacturing occupations in the State, due to the favorable conditions for industrial growth, such as cheap raw materials, unusually low fuel and power costs, good labor, favorable climatic conditions, a large and increasing local market, and low freight costs from a series of Gulf ports.

The board reports that transportation and trade occupations in Texas have shown gains, as has employment in the various clerical positions. The increases are believed due to the rapid growth of the State and to the increase in oil production and manufacturing. One other aspect has been noted—the entrance of women into almost all of the occupations. This is a recent development in Texas.

¹⁷ Six Months' Report, August 1934 through January 1935, pt. VII, p. 1.

LOCATION OF INDUSTRY

Industrial surveys by State Planning Boards indicate that, with but few exceptions, the location of industrial establishments has in the past been more a matter of chance than of selection based upon detailed studies of the various favorable and unfavorable factors involved.²⁰

It is true that to some extent the development of industry has followed transportation systems, and it is certainly true that with improved transportation facilities, plants have been located in communities previously considered inaccessible. Also improved highway systems and the widespread use of motor vehicles now make it possible for industries to operate some miles from the residence of workers.²¹ Definite movements toward decentralization, however, have not been demonstrated.

During periods of economic distress the larger industrial areas, because of their large unemployed population and the congested living conditions there, are faced with peculiarly difficult problems. It is this fact that has served to focus attention upon the problem of the relocation and development of new industries.²²

²⁰ A Study of Wisconsin, Wisconsin Regional Plan Committee, December 1934, p. 311.

²¹ *Ibid.*

²² *Ibid.*

In Indiana,¹⁸ "a number of partial studies have been made to determine those types of employment which are supplementary to each other. Extended investigation of these should be made in order that plans may be developed for combining industries, using the same personnel at different seasons of the year. It might be possible in some cases to combine two industries and an allotment of time for the raising of crops."

The Illinois report notes that manufacturing establishments are by far the greatest source of employment in the State, employing directly in normal times about 700,000 wage earners and paying more than one billion dollars yearly in wages. "No economic equilibrium can obtain in the State without the existence of normal conditions in the manufacturing and general industrial fields", the report states,¹⁹ and recommends: "That encouragement be given our present industries in order to increase employment and the manufacture of goods, to help these industries in maintaining their present position and to attract economically sound new industries."

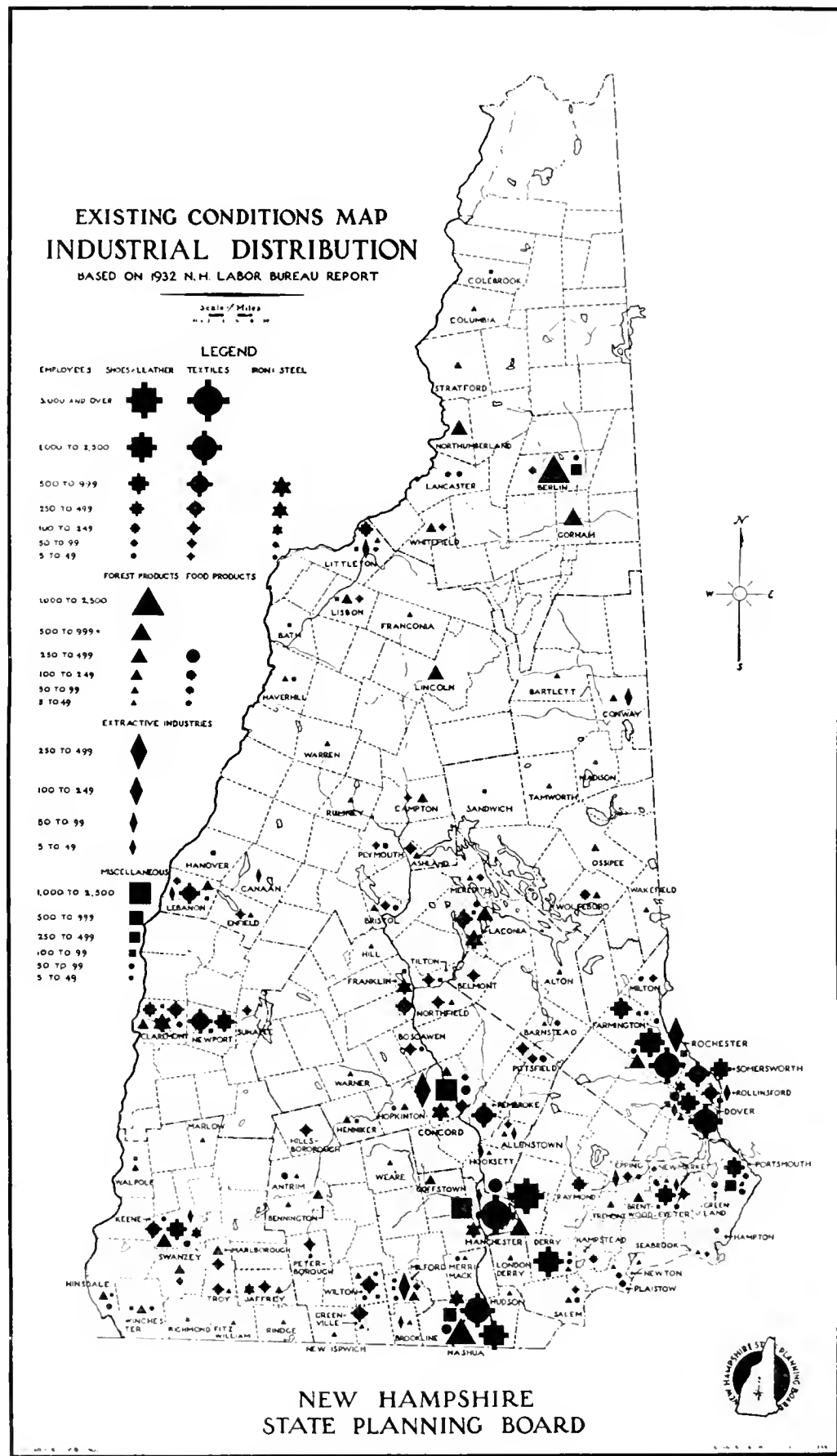
¹⁸ A Report of the Consultants of the State Planning Board of Indiana For the Period Ending Feb. 22, 1935. Pp. 31, 32.

¹⁹ Report of the Illinois State Planning Commission, December 1934, p. 18.

Estimates of probable industrial developments have been derived from surveys of trends in industrial growth and expansion. The Iowa State Planning Board in its study of Iowa business and industry has traced the westward tendencies of industry to discover, if possible, what Iowa may expect in the future with respect to new industries, and, specifically, whether it will be possible for the State to attract and hold industries which will bring relatively permanent economic and social advantages. The board observes that, although during the period 1914–29, there was little change in the national position of Iowa as a manufacturing State, certain changes in the location, rank, and national importance of some of its industries were significant. Iowa industrial development has undergone marked decentralization. The leading manufacturing city, Des Moines, accounted for only 14.3 percent of the State's output of manufactured products in 1929. The remainder of the manufacturing output was from a number of small urban areas, well distributed over the State.²³

In New Hampshire, the State Planning Consultant found that since 1909 there has been a decrease in the total number of industrial plants in the State, and since

²³ A Report of Progress of the Iowa State Planning Board, September 1934, pp. 427, 428.



1919 a decrease in number of wage earners, while wages and the value of the products manufactured have increased. In New Hampshire the decreases in the number of plants and number of wage earners are opposite to national trends. However, the Consultant has observed that industry as a source of wealth to New Hampshire, in taxable values, has shown an increase in the past and may possibly continue to do so in the future, although he believes that future employment in industry will continue to decrease.²⁴

The tendency of industry and commerce to locate in urban communities was pronounced throughout the early years of industrial expansion in the United States, and is accountable for the congestion of skilled and semiskilled labor in localities near industrial establishments. During the periods of greatest industrial development there was a notable concentration of wage earners in large urban communities, accompanied by increases in the cost of living there, and progressively increasing wages. Immediately after the decline in industrial activity, however, what advantages of urban living had previously been enjoyed by such workers were lost to them, and their condition rendered acute by continued unemployment.²⁵ Thus it has been suggested that industry be induced to move from urban areas in order that labor may be decentralized, and the effects of recurring economic unbalance be thereby lessened.

The New England Regional Planning Commission believes there is a pronounced trend throughout the entire country toward industrial concentration in the secondary urban areas. This condition is characteristic of New England, the studies of the commission have revealed.²⁶

The Pennsylvania State Planning Board has found that already there is a tendency on the part of industry to migrate from industrial centers to small outlying towns, or to States where adequate labor, power and distribution facilities are available. Although, as the board has noted, there is not any specific data regarding this movement, it does not doubt that such a movement exists, and recommends that any program of industrial planning must seek to ascertain basic reasons for this change.²⁷

In contrast, the Wisconsin State Planning Board has found no definite evidence of industrial decentralization in Wisconsin.²⁸ It reports, however, that much has been spoken and written about the advantages and

disadvantages of such a movement, and that a frequent proposal is to found agricultural-industrial communities where the workers would have an opportunity to devote their unemployed time to the production of food for their own consumption.

The New Jersey State Planning Board believes that it is important to discover if there has been a redistribution of industry in New Jersey, and to determine the type of industry which is finding location outside of urban areas most attractive and practicable.²⁹ The board has found there is little evidence of a marked tendency toward decentralization. However, there has been a much stronger tendency toward redistribution of industry within the close and congested metropolitan zones. Only textile and certain relatively small manufacturing enterprises have shown a tendency to locate outside the metropolitan areas.

The Kentucky Planning Consultant has found, after a study of industrial trends in the State, that neither concentration nor decentralization of manufacturing in the past few years has been sufficiently pronounced to indicate a trend.³⁰

After studies of industrial trends in Illinois, the Illinois State Planning Consultant has been able to conclude that although decentralization, except in the manufacturing of shoes, has been only slightly in evidence, there is a growing tendency toward the "suburbanization" of industry. The commission believes that removal to wholly rural areas may be financially advantageous in the cases of industries which have need for a concentrated market, or which are not bound to a producing center because of the perishability of the materials processed.³¹

Studies were made in several States in order to discover, if possible, what new industries might be advantageously developed. In Utah, the State Planning Board found that residents between the ages of 20 and 35 years were leaving the State to find a livelihood elsewhere. The board believed that the movement was not due so much to the lack of resources in the State as to failure to develop what resources undoubtedly exist. Subsequently, a survey of Utah's commercial trade was prepared by the Utah State Planning Board.³² Detailed studies were made of State imports in order to ascertain which of these products might be produced at home. Briefly, the study would determine the possibilities of creating a more favorable balance of trade for Utah, and would indicate which industries should be encouraged.

²⁴ State Planning, Mar. 15, 1935, pp. 47, 48.

²⁵ A Study of Wisconsin, Wisconsin Regional Plan Committee, December 1934, pp. 54, 55.

²⁶ A Plan for Progress Report to the National Resources Board, April to October 1934, p. 16.

²⁷ Preliminary Report to the Hon. Gifford Pinchot, Governor of the Commonwealth of Pennsylvania, and the National Resources Board, 1934.

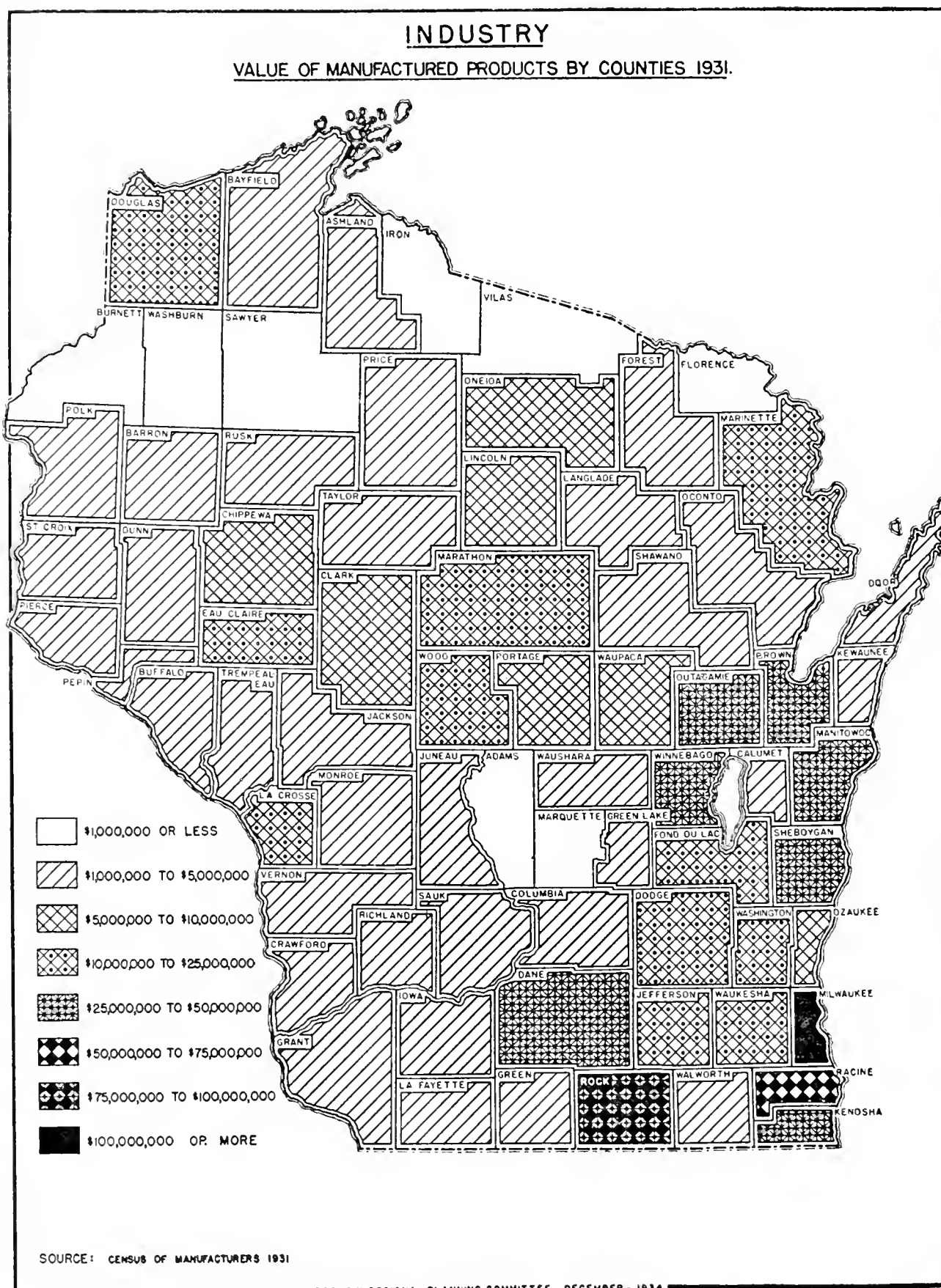
²⁸ A Study of Wisconsin, December 1934, p. 311.

²⁹ Preliminary Report, vol. II, March 1935, pp. 55, 56, 57.

³⁰ Preliminary Report on a Series of State Planning Studies, September 1934, pt. VII, pp. 30, 31.

³¹ Report of the Illinois State Planning Commission, December 1934, pp. 18, 19.

³² A State Plan, Progress Report, Apr. 15, 1935, p. 268.



The Washington State Planning Council recommended research in new uses for fruits and fruit extracts, new industrial uses for agricultural products, studies of uses for magnesium, and, because of the available hydroelectric power there, the development of industries using electric welding.³³

The Pacific Northwest Regional Planning Commission believes that a comprehensive survey of the fishery resources should be made, and the relationships of other uses of internal waters to fisheries be determined and evaluated.³⁴ Similarly, the Iowa State Planning Board recommended a comprehensive study of the commercial fishery industries along the Mississippi and Missouri Rivers.³⁵

³³ First Biennial Report, Feb. 23, 1934, to Sept. 30, 1934, pp. 33, 34.

³⁴ Progress Report, vol. III, January 1934 to January 1935, p. 83.

³⁵ Second Report, April 1935, p. 63.

The New Hampshire State Planning and Development Consultant has recommended that a new State agency be established for industrial research, which would serve as an advisory bureau to industries desirous of coming into the State.³⁶ This agency would offer information concerning available factories and sites—their location, capacity, fitness, equipment and adaptability—and also concerning social and housing facilities.

The Illinois State Planning Consultant has also recommended that information in regard to zoning requirements as well as such facilities as transportation, water resources, wage rates, and labor market, be made available in order to assist in the proper location and relocation of industries.³⁷

³⁶ State Planning, Mar. 15, 1935, p. 48.

³⁷ Report of the Illinois State Planning Commission, December 1934, p. 19.

UNEMPLOYMENT

Unemployment studies have been made by State Planning Boards (1) in connection with emergency relief work programs, and (2) as part of long-range planning for the permanent employment of all employable persons.³⁸

All such studies distinguished cyclical from technological and seasonal unemployment. Many took account of other causes, such as superannuation of workers. Attention was focused largely upon cyclical unemployment (that which occurs when large numbers of wage earners are discharged during a general business recession) because of its persistence in recent years. Many boards devoted separate studies to the permanent and significant unemployment created by seasonal fluctuations in industry and business, the recurrence of which has for some years necessitated publicly financed unemployment relief. The present increasing tendency to substitute machines for man power was observed and commented upon by almost all boards, and the shortening span of years in which gainful employment may be expected was taken into account, but not, in all cases, held insurmountable.³⁹

The United States Bureau of the Census classifies as employables only such persons as under normal business conditions are habitually gainfully employed. It might be expected that during periods of business recession those registered as unemployed and in need of work would come exclusively from the lists of employables, but this has not been the case. As the Wisconsin regional plan committee⁴⁰ points out, there is a wide numerical difference between the theoretically

possible and actually classified employables. This difference constitutes a resource of man power which appears on a contracted labor market, and disappears in an expanding market. The result is an exaggerated unemployment problem in times of economic depression and a labor shortage during prosperous industrial years. The Wisconsin committee notes that when labor is scarce and well paid, the family budget can be balanced adequately with the earnings of the head of the family, but that unemployment and low wages make it necessary for more members of the family to seek work. Unemployment figures are thus increased by forces which cease to operate during more normal periods.⁴¹

The unemployment which is caused by adverse economic conditions has so far been little influenced by planning.⁴² The reemployment of large numbers of unemployed industrial workers may depend upon the development of new products or upon the decentralization of existing industries. The establishment of rural industrial communities where agriculture is a part time activity, or of self-help and barter organizations, may be an answer, although this is a type of emergency arrangement which serves rather to maintain the self-respect of the unemployed than to add significantly to total employment and production. Long-range planning, however, is aimed toward the development of the full and effective utilization of all available resources and man power in the country, to satisfy adequately the consumption requirements of the great mass of people.⁴³

⁴¹ Ibid.

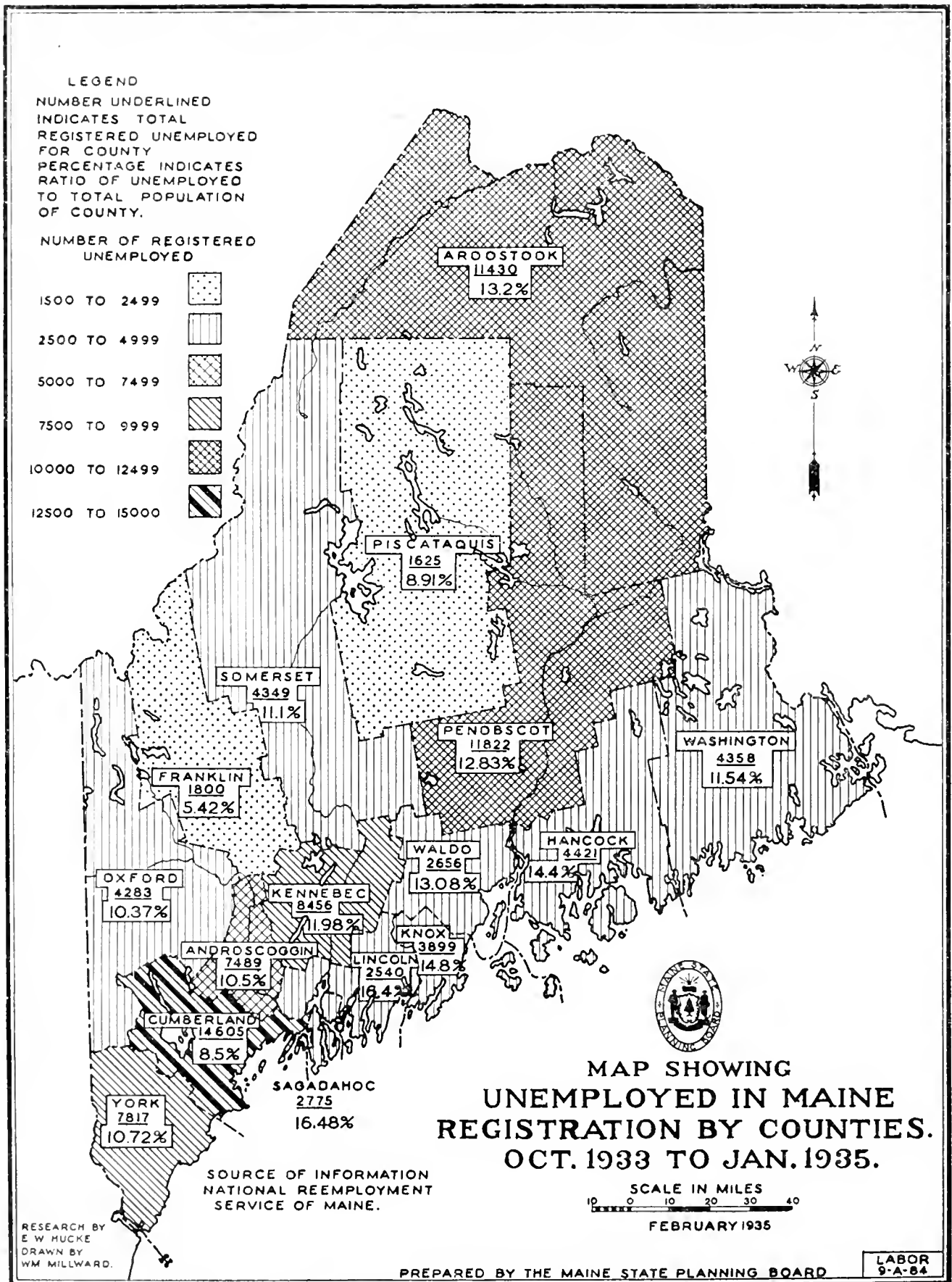
⁴² Preliminary Report, vol. I, A State Plan for Indiana, Indiana State Planning Board, 1934, p. 78.

⁴³ National Resources Board Report, Dec. 1, 1934, pp. 100-101.

³⁸ Progress Report on Employment and on Emergency Work Relief Program for 1934-35. Special Report No. 4 by Indiana State Planning Board, Dec. 10, 1934, p. 9.

³⁹ Report of the Consultants of the State Planning Board of Indiana for the period ending Feb. 22, 1935, p. 28.

⁴⁰ A Study of Wisconsin, December 1934, p. 51.



State Planning Boards have tried to supply the frequently lacking adequate data on the volume and distribution of unemployment. The Michigan State Planning Commission made a census of the unemployed in cooperation with the Michigan Emergency Relief Administration.⁴⁴ The Indiana State Planning Board made studies of the number and distribution of the employed.⁴⁵ Generally such studies were to obtain data for the immediate purpose of planning programs of public improvements.

Inquiries into the causes of seasonal unemployment require detailed consideration of existing industries, and of those which might be developed. The Iowa State Planning Board believes that seasonal unemployment affects a larger number of workers and results in a greater aggregate amount of unemployment over a longer period than does cyclical unemployment.⁴⁶ Seasonal variations in output and employment are stated to be the result of a variety of factors: (1) Seasonal changes in weather, temperature, precipitation, and length of days have marked influence on the conditions of production and on the nature of consumer demand and (2) conventions, religious observances, customs, fashions, business practices, holidays, and vacations affect employment.

As the Iowa Board observed, any effort to reduce the extent of seasonal unemployment is a step in the direction of increasing the utilization of man-power and industrial equipment, and hence a step toward greater productivity and larger real incomes.⁴⁷ The board believes the most likely remedy for seasonal unemployment is to increase the mobility of the working population so that seasonal rises in some industries will result in the employment of workers who have been laid off because of seasonal slumps in other industries. The development of byproducts or of new products will aid in stabilizing the employment in individual firms. Further, it may be possible to develop new industries whose production peaks occur at periods when most production is at a low level. The existence of a wide diversity of industries may be the best insurance against seasonal unemployment in a State or locality.

The Indiana State Board suggests that there should be a study of the seasonal aspects of all industries, and that "this investigation should not be limited to manufacturing, but should include agriculture, mineral activities, and business."⁴⁸

Technological unemployment, according to the Indiana Board probably will continue to increase. Failure to take advantage of more efficient methods is counter to progress and would result in the deterioration of society as a whole.⁴⁹

The Pennsylvania State Planning Board remarks that advancing mechanization of industry has undoubtedly achieved its objective, which is increased productivity. In 1909 the real value of products per wage earner was \$4,460 as against \$7,300 in 1931. Between 1909 to 1929, the number of Pennsylvania's manufacturing establishments decreased at a rate of 3.4 percent every 5 years. The value of the products increased 3 percent, while the number of wage earners was only increasing 0.8 percent for like periods. From these studies the board was able to conclude that marked technological improvements have increased the output per individual in the State's industries to such a degree that no places would be now available for many of the unemployed if business regained its former activity.⁵⁰

However, technological advances may be a means of alleviating seasonal unemployment in spite of the apparent detrimental effect they have upon employment generally. The Iowa State Planning Board believes that seasonal employment may be relieved by technological developments which might permit productive activity during unfavorable weather, especially in the construction industry.⁵¹

Unemployment caused by old-age restrictions in industry requires either the creation of new positions to provide employment for superannuated persons, or an extensive system of old age pensions and benefits made possible through State or Federal legislation. Employment of such persons is not hopeless, the Indiana State Planning Board believes.⁵²

The most persistent among suggestions from State Planning Boards for relieving the pressure of unemployment during the present industrial depression has been that for settling the urban unemployed on the land. The Minnesota State Planning Board observed that advocates of such land use support it on the ground that it will enable unemployed workers to become established in an economy in which they can produce many of their own goods.⁵³

The board states,⁵⁴ "There are strong reasons for not greatly expanding agricultural production in this

⁴⁴ Public Works Inventory and Program, Mar. 1, 1935.

⁴⁵ Progress Report on Employment and on Emergency Work-Relief Program for 1934-35—Special Report No. 4 by Indiana State Planning Board, Dec. 10, 1934.

⁴⁶ Seasonal Unemployment, Iowa State Planning Board, June 1935, pp. 1-2.

⁴⁷ *Ibid.*, p. 3.

⁴⁸ Indiana State Planning Board, Preliminary Report, 1934, p. 78.

⁴⁹ Preliminary Report, Vol. I, A State Plan for Indiana, 1934, p. 78.

⁵⁰ Preliminary Report to the Hon. Clifford Pinchot, Governor of the Commonwealth and the National Resources Board, December 1934, pp. 425, 426, 430, x.

⁵¹ Seasonal Unemployment, Iowa State Planning Board, June 1935, p. 4.

⁵² Preliminary Report, vol. I. A State Plan for Indiana, 1934, p. 78.

⁵³ Report of the Minnesota State Planning Board to N. R. B. pt. II, November 1934, p. 35.

⁵⁴ *Ibid.*

country. While it is true that farms can be to a degree self-sufficing, it is a mistake to conclude that settlement of the kind proposed will have no effect upon established farmers. The new men will need cash for many purposes. They will need to buy clothing, equipment, even some food. Taxes and interest will have to be paid. They will need some cash income if they are not to become a burden upon the communities in which they live. In other words, if unemployed men are encouraged to go on the land in large numbers, they will unavoidably come into competition with other farms in an overworked industry."

The Texas State Planning Board, however, holds that some such shift is inevitable.⁵⁵ "The mechanical scientific age of this country having unexpectedly reached a condition where it is failing by 33 percent to provide a means of livelihood for the population, it appears inevitable that large numbers of people must, for the next generation, have recourse to an earlier and more elementary civilization, and gain a simpler but adequate living from the soil." This board observes that the land resources of Texas if properly used offer opportunities for livelihood to hundreds of thousands of additional families.⁵⁶

Providing employment for stranded families presents yet another phase of the unemployment problem. The Illinois State Planning Consultant has found that decline in the market for Illinois coal and improved mining methods have left stranded populations in several areas. In these circumstances, the Consultant

has recommended that diverse industries be encouraged to locate in these areas, in order to employ the stranded workers,⁵⁷ rather than that the workers be advised to rely upon agriculture.

Stranded agricultural populations usually require rehabilitation, which may mean removal from their present localities.^{57a} The Ohio State Planning Board warns, however, that in spite of the present low incomes and standards of living of many families in the poorer areas, the question still remains unanswered as to whether or not they would be better off elsewhere. Further study, according to the board, is needed if a beneficial readjustment is to be made.⁵⁸

With the relative general decreases in agricultural occupations that have been noted by the State Planning Boards, and the increases in employment in manufacturing and mechanical industries, private industry must be encouraged to provide maximum employment opportunities in order that unemployment be kept at a minimum.⁵⁹ The Wisconsin regional plan committee emphasizes the importance, in any program of recovery, of analyses of employment conditions. The committee believes that the unemployment problem is more than a reemployment problem, largely because of the tremendous increase in the number of employable persons in the years since 1929. The increased number of workers has aggravated the unemployment problem by requiring creation of new employment opportunities.⁶⁰

⁵⁷ Report of the Illinois State Planning Commission, December 1934, p. 11.

^{57a} Compare recommendation of the National Resources Board with reference to subsistence homesteads on page 3 of its December 1934 report.

⁵⁸ Preliminary Report on a Series of State Planning Studies, Aug. 15, 1934, ch. II, p. 31.

⁵⁹ Report of the Illinois State Planning Commission, December 1934, pp. 7, 8, 52.

⁶⁰ A study of Wisconsin, December 1934, p. 75.

⁵⁵ Six Months Report, August 1934 through January 1935, pt. Part V, p. 9.

⁵⁶ *Ibid.*

RELIEF

Unemployment relief problems have naturally been studied by a number of State Planning Boards since in many cases these boards are serving in an advisory capacity to the emergency relief organization. In a summary of the situation in Wisconsin, the State Planning Board reports:⁶¹ "This distribution of relief to the needy has been, in the past, a local problem administered by social agencies operating in the interest of charity. Because of the relatively small percent of the population which it affected, there was no necessity for permanency in its set-up; in fact, the continuous shifting of the number affected made temporary arrangements more expedient. Favorable employment conditions, broken only by seasonal and other temporary business slumps and technological maladjustments, has afforded, in the main, adequate opportunity for self-sustenance. Only a few have had to be helped to sustain themselves.

However, the board notes that: "The economic distress and the mass unemployment of the last 5 years, has necessitated fundamental changes in the concepts, policies, and administration of relief. Although, at first, we adhered to the idea of the temporary character of the problem, unchanging conditions and, in fact, a deepening of the crisis has placed the problem entirely beyond the resources of charity and private agencies. Millions of persons unemployed necessitated billions of dollars for their support, and adequate sums could be raised only through public resources. The current contention that even a return to normal conditions would still leave millions of persons unadjusted and perhaps unadjustable has tended to bring about a greater permanency in the relief set-up than heretofore contemplated.

"Many months of experience with direct relief has clearly brought out other needs. Where the lives of millions of persons were concerned views toward

⁶¹ Wisconsin Regional Plan Report, 1934, p. 93.

rehabilitation have had to be considered. Various work programs have been set up with this view, but a limited knowledge of the occupational and age qualities of the persons on relief, coupled with the tremendous cost of such work relief, has not been conducive to the formulation of any set and clearly defined policies. The results of completed studies and of studies yet in progress will undoubtedly help in the intelligent shaping of such policies."

In South Dakota the menace of recurring drought will remain even after the present economic maladjustments are remedied. The State Planning Board observes that:⁶² "Today, the last material frontier of America is gone, and if the present population of the State continues to remain on the land, relief loads, comparable to those of the present, must be expected in periods of recurring severe drought. Thus, there are two alternatives, so far as the people of South Dakota are concerned. One is to work out a system of land use and farming, whereby individuals may be enabled to build up sufficient reserves to carry them through the periods of severe drought. The second alternative is the continuation of the present systems, with the expectation that governmental agencies will provide in emergency periods vast amounts of aid, such as Federal Emergency Relief benefits, seed and feed loans, Civil Works Administration, and public works which have been made available during the present crisis."

Referring to its map showing total per capita relief expenditures by county commissioners for the 4-year period from 1930 to 1933, the board says further:⁶³ "These data seem to indicate a rather healthy condition in most of the State and would lead the uninformed observer to the conclusion that the (relief) load * * * is not appreciable. Part of the explanation for the expenditures for relief may be found in the fact that South Dakota is comparatively a young State and in many communities the original settlers' families remain relatively intact; i. e., the homesteaders were younger people, particularly in the western part of the State, which has been settled mostly since 1900. It becomes readily apparent to the observer that the relief expenditures for the care of the indigent are very liable to be upwards in the years to come.

"There is another factor outstanding in importance. The pioneer was a man with an extremely sturdy sense of responsibility. He suffered want rather than submit to the disgrace of charity."

The board warns further that:⁶⁴ "The extensive activities of the Federal Government in the State have

encouraged the development of a spirit of expectancy of help from central authorities which has not existed before. The feeling of local self-sufficiency is rapidly disappearing. Many relief recipients fear that if the emergency relief were cut off they would no longer be able to care for themselves and that local organizations either would not or could not care for them. The spirit of initiative which has heretofore made people want to do something to solve their local problems is sadly lacking in many cases."

Among recommendations of the South Dakota State Planning Board to the Governor in the matter of public relief is that:⁶⁵ "The Federal Government as rapidly as possible place upon the State the financial responsibility for caring for the dependent, and that a staff of technically trained social workers be developed as quickly as possible to aid in the very important process of restoring to emergency-relief clients a sense of self-respect and of self-sufficiency."

In Montana studies were made bearing on the same problems. In a recent report, the State Planning Board says:⁶⁶ "As a result of the Welfare Section meeting of the State planning conference held in April (1935), a social study was made of four Montana counties. The study covered a classification of families on relief, with an attempt to arrive at an understanding of the causes and to discover what percentage were employable and unemployables; i. e., the aged, mothers with children under 16, and the disabled. The study also included a survey of the agencies caring for persons incapable of supporting themselves, their adequacy, and method of treatment. The relief history of the families in June 1934 and their earnings over the 5½-year period were studied. The number of persons suffering from physical and mental disabilities and ill health, the educational background of relief clients and their present housing situation were also studied. A superficial study of children's problems, including physical and mental health, neglect, and delinquency was made."

While State Planning Boards realized the necessity of public emergency relief, warnings of its continuance are numerous. The New Mexico State Planning Board⁶⁷ stated that the number of families on relief rolls in some counties is so appalling that "it not only challenges our ideas of a standard of living but our ideas of liberty and independence as well. We cannot for long carry millions of people on relief rolls and still expect to continue to boast of our independence."

⁶² Progress Report, Mar. 15, 1935, pp. 149-150.

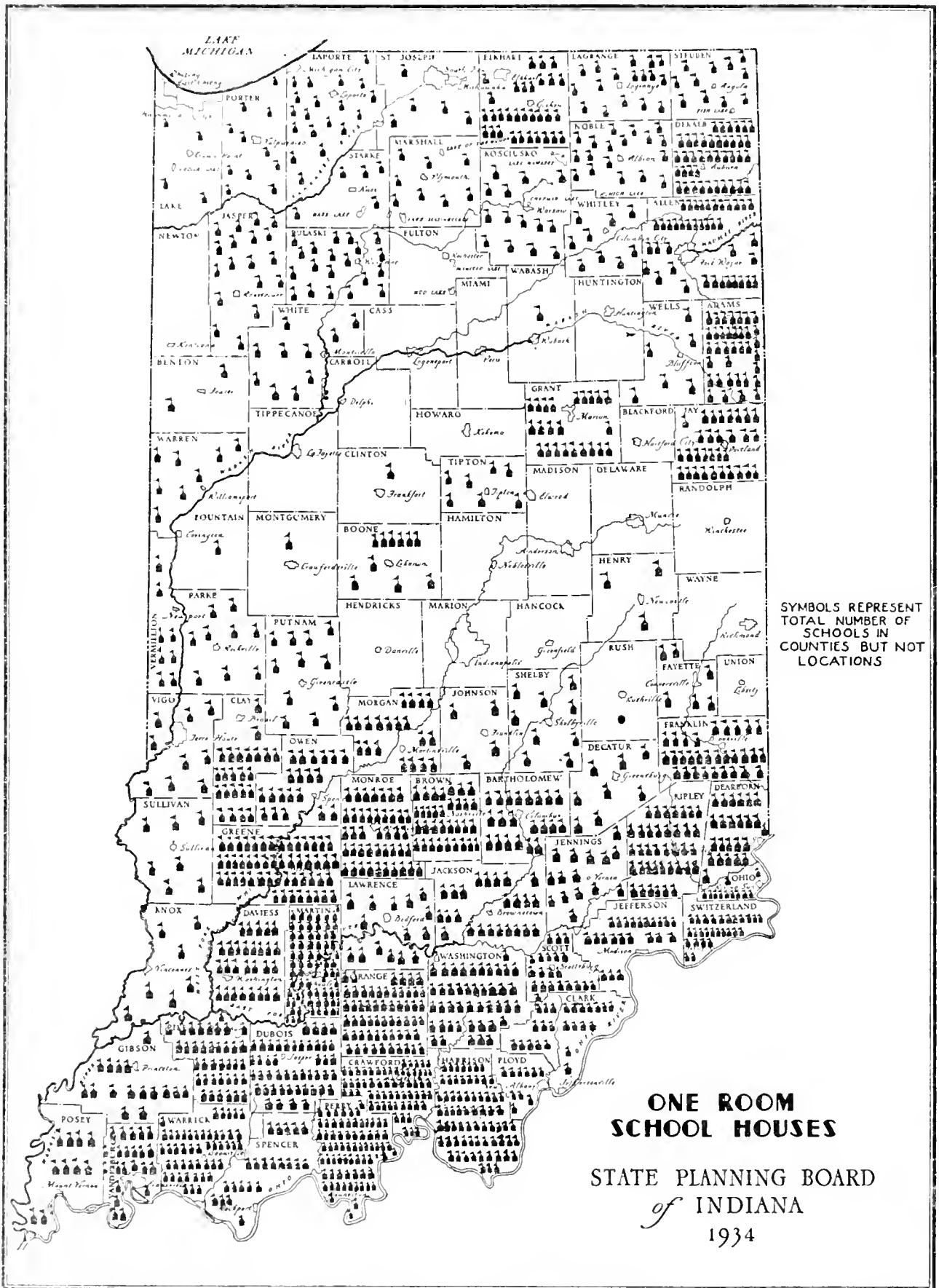
⁶³ Montana State Planning Board Report, Apr. 16, 1935, p. 24.

⁶⁴ Second Progress Report, Apr. 15, 1935, New Mexico State Planning Board, p. 94.

⁶⁵ Progress Report, Mar. 15, 1935, p. 31, 32.

⁶⁶ Progress Report, Mar. 15, 1935, pp. 144, 144a, 145.

⁶⁷ Progress Report, Mar. 15, 1935, p. 146.



EDUCATION

State Planning Boards have taken account of the social implications in the present financial condition of education, its uncertain future, and have studied tax systems as they affect school revenues.

The Michigan Board, commenting on the critical position of education in that State, points out that it does not represent a temporary condition from which recovery will be automatic. "Although all units of Government are confronted today with problems of vital significance to the general welfare, the problems of the educational system are particularly critical. In a short 3-year period, a 45 percent decrease in school revenue has not only necessitated a drastic curtailment of the whole school program, but also has demanded a complete revaluation of the administrative structure, the methods of finance and, fundamentally, the goals and purposes of public education. Basic to all thinking on the problem is appreciation of the fact that the present critical period is not an emergency from which we shall emerge in a *laissez-faire* manner. Discerning leaders have observed for 10 years the approach of the present difficulty. In looking toward the future they realize that a return to better economic conditions will not improve greatly the school finance situation resulting from the break-down of the fundamental tax structure."⁶⁸

Greater social demands than ever before are being made of education, according to the Oregon State Planning Council, which says: "Up to the present moment our civilization has demanded of education the equipment of the individual with certain skills or techniques or the possession of certain bodies of information. In view of the uncertain future confronting young and old alike, education ought conceivably to provide the individual with ideals and attitudes to enable him to live a satisfactory existence with a certain degree of independence of the processes by which he keeps himself alive."⁶⁹

Kansas submits a case for adult education in this connection: "With the advancement of machine production, authorities predict a permanent unemployment situation involving 4 or 5 million persons. In addition to this, a shorter day points to an expansion of leisure time. Provision for this expanded leisure will render necessary a great increase in recreation facilities and an opportunity for study. The loss of morale, due to idleness, leads easily into delinquency and crime. General support by the State of an ade-

quate program of adult education is, therefore, of great urgency."⁷⁰

The same board proposes a survey of the distribution of institutions of higher education, including not only State but municipal and privately endowed schools, and a study of the efficiency of the present State system of higher education. The latter would include a survey of the legitimate fields of activity of each school, the problem of duplication of study, etc., with a view of achieving economy of effort and expenditure. The board also wishes to determine the adequacy of present financial support to such institutions, and the possibilities for establishing additional collegiate institutions. It believes in recognizing the new function of higher education as providing a means of relieving unemployment among young people, who as full-time students are removed from competition in the employment market. Another study of adult education is being undertaken with a view to enabling older persons to prepare themselves for new vocations, or for more effective use of their leisure.⁷¹

In Indiana it is expected that education will offer opportunities for profitable activities in new ways. "In order to take advantage of opportunities for employment it is essential that an individual have proper training and education. Vocational and professional training should be within the reach of everyone and the State Planning Board should encourage the establishment of such opportunities. The progress of research, the development of new methods of manufacturing, and of new products clearly indicate that there are infinite possibilities for increased activity. The old theory that there must always be a class of people of low standards to take care of menial labor is not necessarily sound. Labor-saving devices have been designed which take the place of many laborers. There seems to be no limit to what can be done in this direction. It would, therefore, seem to be true, that with proper education and training will come the opportunities for profitable activity in wholly unexpected ways. Progress lies in the direction of greater understanding which comes with better education."⁷²

The Idaho State Planning Board has developed a plan for a complete survey of educational facilities of the State, and will recommend reorganization for lower costs and more effective instruction.⁷³

⁶⁸ Michigan State Planning Commission—A Preliminary Report on Planning, January 1935.

⁶⁹ Oregon State Planning Council, Preliminary Reports of Divisional Committees, July 1934 to January 1935, p. 265.

⁷⁰ Kansas State Planning Board, Progress Report, September 1934, p. 60.

⁷¹ Kansas State Planning Board, Progress Report, Sept. 4, 1934, p. 58.

⁷² Indiana State Planning Board, a Report of the Consultant for a Period Ending Feb. 22, 1935, pp. 12, 13.

⁷³ Idaho State Planning Board, Progress Report, December 1934, p. 6.

In Illinois the Planning Consultant, after careful research, recommends "that the extent of educational facilities to meet the needs of varying age groups be determined; and that the amount of assistance which those in greatly increased old-age brackets will require be estimated."⁷⁴

The Tennessee State Planning Commission has conducted an exhaustive survey of educational facilities to present an inventory of conditions now existing in the State. Studies were made of the physical equipment of the elementary schools and estimates were furnished by school officials of the approximate amount of money needed to rehabilitate the school system and provide for its efficient operation. The 400-page report contains numerous maps of pertinent data for each county and photographs of various types of schools in the State.⁷⁵

Many State Planning Boards have realized the need of some reorganization of the present school system. A reorganization proposal by the Arkansas board already is being put into effect.⁷⁶ The board says: "On the basis of the number of children affected the proposed consolidation program is 60 percent complete. Of course, after the consolidations are made the setting up of the new school program still lies ahead. This is a work that can be fairly well completed only within a period of 3 or 4 years. There are but few communities, however, that have not already been affected by the program within recent months. Its continuation will depend largely upon the future action of the State legislature."

Commenting on a reorganization of the educational system in Pennsylvania, the State Planning Board there says: "It seems obvious that the reorganization of our present system into larger local units of school administration and a complete revision of our State-aid policy are imperative. Other proposals submitted in this report are largely dependent upon these adjustments as first and basic steps. Through them Pennsylvania can secure for itself a better educational service at the same cost or an equivalent educational service at a lower cost." Expenditures and taxation data would furnish material for considerable research the board believes.

Studies of educational trends by the State Planning Board in Connecticut include studies of public expenditures for educational institutions, methods of raising taxes for these institutions, preschool education, adult education, school population and attendance, and child labor laws.⁷⁸

The Kansas State Planning Board is undertaking to "determine the extent to which education is a State or local function, to achieve better adjustments of inequalities which arise both in taxation and in educational opportunity, due to the unequal distribution of children, property values, and school districts." It is also making a study of present training requirements for teachers with a view to raising the minimum qualifications. The board is of the opinion that the taxpayers generally complain not so much of the excessive cost of public education as of the ineffectiveness of the expenditures for it. In its studies the State Planning Board has set up three objectives.⁷⁹

1. Gathering all available data relating to the school problem.

2. Correlating and preparing this data in such a manner that the public may easily understand it.

3. Disseminating the data so that those who pay for the costs of education and those who enjoy the benefits of it may have a better understanding of the ends to be achieved and the problems to be met.

Many studies have been made of the costs of education. Charts and maps have been prepared showing the per capita cost in both rural and urban districts. In regard to the cost of higher education the Minnesota board observes: "The need for increasing the expenditure for higher education so the best proportion of the population is to receive such education is pressing. Larger proportions of our youth can be given the benefits of satisfactory college or university training only if the Commonwealth decides that it can afford to spend a greater portion of its total income in providing additional faculty."⁸⁰

After studying the financial condition of Michigan schools, the State planning commission reports: "In spite of the enactment of school-aid legislation by the 1933 regular and special session of the legislature, Michigan schools generally have little hope of a rehabilitation program. Radically curtailed property tax revenue, a decreased primary-school interest fund, and relatively small returns from the retail-sales tax and from the liquor tax are not providing sufficient income in addition to local revenues to adequately finance public-school education in Michigan. A surplus of teaching personnel has forced salaries to a minimum and only the unreasonable salary reductions have made it possible for many districts to keep their schools open. Furthermore curtailed curricula, crowded classrooms, the overloaded schedules, the elimination of important services, and the failure to pay tuition are characteristic evils to be found in all parts of the State."⁸¹

⁷⁴ Illinois State Planning Commission Report, December 1934, p. 48.

⁷⁵ Tennessee State Planning Commission, Preliminary Survey of the Physical Equipment of the Schools of Tennessee, June 20, 1935.

⁷⁶ Arkansas State Planning Board, Preliminary Report, September 1934, p. 189.

⁷⁷ Pennsylvania State Planning Board, Preliminary Report, December 1934, p. 597.

⁷⁸ Connecticut State Planning Board, Condensed Report, July 1934, p. 58.

⁷⁹ Kansas State Planning Board, Progress Report, September 1934, pp. 56, 57.

⁸⁰ Minnesota State Planning Board, Supplementary Report, pt. III, p. 9.

⁸¹ Michigan State Planning Board, Preliminary Report, September 1934, p. 303.

In Ohio according to the State Planning Board approximately 19 percent of the total capital expenditures of the State and its subdivisions are devoted to the development of the educational system.⁸² The board believes that generally the largest proportion of taxes levied by local subdivisions in Ohio are used to defray the fixed charges and operating expenses of the school districts. In some Ohio communities the cost of education is as high or higher than the aggregate cost of all other public services furnished by the community. The outstanding fiscal problem of the State is that of finding revenue to aid the great majority of school districts unable to meet fixed charges or operating expenses.

"Excessive cost of adequate school services in sparsely settled and poor townships presents still another problem", reports the New Jersey State Planning Board. "In some instances the cost of maintaining schools and roads is greatly in excess of the maximum tax revenue collectible." A special study is being made by the Board to determine (1) those areas dependent upon State and county subsidy for these services and (2) the degree of their dependency. It may be possible that a varying degree of relief may be obtained by school consolidation and purchase by the State of submarginal areas.⁸³

The status of young people in rural areas is being studied by the Kansas State Planning Board. It believes that the rural school serves the double purpose of an educational institution and a community center. The board states: "In rural regions it is the unit of government to which the citizen has his closest relation. Here he finds opportunity for exercise of the functions of leadership, and, more often than not, gets his first experience with democracy. While the need for consolidation and reorganization of one-teacher districts is obvious and while the single purpose of affording every boy and girl an adequate educational opportunity must be guarded as the objectives, the virtue of the school district as a laboratory of social and governmental experience must not be forgotten."⁸⁴

After a similar survey of young people in rural areas the Iowa State Planning Board says: "There are a great many young people of the rural districts of Iowa who are not attending any organized educational insti-

tution. Of approximately 75,000 boys from 14 to 21 in the State some 40,000 are not receiving any systematic instruction in any educational institution. The number of girls in this age group is about the same although a larger percentage of them is attending school." The survey, sponsored by the education committee of the State Planning Board, was directed toward determining the educational, economic, vocational, and social status of the young men and women.⁸⁵

The organization and administration of schools also have been studied by State Planning Boards.

The New Hampshire State Planning Report, in reviewing the system of school supervision in the State, said: "In order to provide supervision to the schools in the most efficient and economic manner, school districts are permitted to combine in supervised units and engage a superintendent jointly. By this method about 60 percent of the children in the rural areas have the same advantages of a high standard of supervision as have generally the urban school population. These superintendents, approximately 60 in number, are paid jointly by the local districts and the State board."⁸⁶ In its recommendations, the report asked that these supervisory unions be consolidated and reduced in numbers. It also recommended that consolidation should eliminate many one-room schools, improve the school standards, and lower the general cost of instruction. The Consultant feels that it is desirable that teachers be given salaries commensurate with the responsible work with which they are entrusted, but at the same time their qualifications should be raised to effect a corresponding increase with quality of service. The extension of State aid is emphatically recommended.

"Generally speaking, great strides will be made during the next decade in socializing both curriculum content and methods of teaching", according to the Pennsylvania State Planning Board. "More and more they will tend to draw from immediate environment the subject matter of course content, and increasingly they will duplicate natural living conditions as learning situation, developing in individuals qualities which will equip them for successful participation in community life and for making intelligent contributions to society."

⁸² Ohio State Planning Board, Preliminary Report, 1934, sec. 8, p. 2.

⁸³ New Jersey State Planning Board, Preliminary Report, Mar. 30, 1935, vol. 2, p. 45.

⁸⁴ Kansas State Planning Board, Progress Report, September 1934, p. 63.

⁸⁵ Iowa State Planning Board, Progress Report, September 1934, p. 303.

⁸⁶ New Hampshire State Planning Board Report, Mar. 15, 1935, p. 79.

9. GOVERNMENTAL RELATIONSHIPS

Some of the most significant achievements of State and regional planning boards, as evidenced by their reports, are (1) their assistance in bringing about the active coworking of Federal agencies with the States, (2) the experiments of interstate planning which have been conducted in various regions of the United States, (3) their coordinating activities within the State governments, and (4) the effective working relationships which they have established with local government and local planning commissions.

Students of government have long felt that the layers of American government were not adequately integrated. Perhaps because their work is, in its very nature, a work of perspective, the State planning

boards seem to be one of the first branches of government to recognize this fact definitely and to take steps to establish informal functioning relationships among the various levels. In most of the laws establishing State Planning Boards this principle is recognized and stated, as for example in the Indiana Act which sets forth the duty of the Board "to cooperate with the National Resources Board or other agencies of the United States government, with other states or territories and their agencies, and with the departments of the State of Indiana and all other public agencies in the state."¹

¹ 1935 Indiana Laws, Chapter 74.

STATE PLANNING AND THE FEDERAL GOVERNMENT

Although State Planning Boards are integral parts of State government and likely to become more so in the future, nevertheless much of their start was due to Federal action and cooperation. No dogmatic "State rights" or "Federal control" theories are to be found in the objectives of the State Planning Boards. The Texas Board, with the natural pride of Texans in their State, devotes a few pages of its report to the history of the Lone Star State. New York, conscious of the fact that wealth and population make her interests more nearly national than any other State, talks more freely of "national" problems. Aside from the natural but slight differences in style of expression, the boards display a very objective approach to the question of Federal-State relation.

Cooperation with Federal Agencies

Throughout the reports runs a double theme of State and Federal activity. Effective relationship of all the boards with the national Resources Board are established by the liaison work of the consultants. Oregon reports joint Federal and State planning on construction and improvement of interstate highways.² Kentucky notes cooperative studies by the Kentucky Agricultural Experiment Station and the United States Bureau of Agricultural Economics.³ Connecticut comments on a survey of rural population by the State Agricultural College and the United States Department of Agriculture.⁴ Florida suggests Federal and State

cooperation in control of water.⁵ The Kansas Board has worked out a program for joint action by the State Fish and Game Commission and the National Park Service.⁶ Indiana has brought National and State Foresters together.⁷ New Jersey and Oregon report similar examples of cooperation with the Federal Government. The Texas Board has invited representatives of all Federal agencies in Austin to attend its meetings.

Federal Emergency Relief Administration and Agricultural Adjustment Administration projects have, of course, often been worked out by State Planning Boards in conjunction with State departments. Iowa reports such arrangements.⁸ In most of the States, Federal Emergency Relief Administration has carried an important part of the costs of State planning work and has frequently furnished office space and supplied the necessary staff.

Role of State Planning Boards in Federal Public Works Program

Frequently State Planning Boards have had an opportunity to assist the Federal Government and at the same time have contributed to ordered development within the State by acting as a clearing house for reports on public works programs,⁹ or by aiding in an inventory of public works projects.¹⁰

² Report on Water Resources of Florida, Florida State Planning Board, p. 1.

³ State Parks and Recreational Areas, A Report of the Kansas State Planning Board, March 1934, p. 3.

⁴ Preliminary Report, 1934, p. 101.

⁵ State Planning Board Report, April 1935, pt. I, Land, pp. 53-54, pt. II, Water, p. 22.

⁶ Progress Report, California State Planning Board, Dec. 1, 1934, to Apr. 15, 1935, pp. 3 ff.

⁷ New Jersey preliminary Report, Mar. 30, 1935, vol. II, pp. 8-15.

² Six Months' Progress Report, July 1934-January 1935, Oregon State Planning Council, vol. III, p. 166.

³ Preliminary Report on a Series of State Planning Studies, Kentucky State Planning Board, September 1934, p. 11-2.

⁴ Condensed report on planning for Connecticut State Planning Board, Oct. 9, 1934, p. 3.

Separation of Functions in Federal-State Planning

It is possible to outline more clearly the demarcation of functions between Federal and State planning agencies than between State and local agencies. Legislative powers are more clearly defined in the Federal Constitution than in most of the State constitutions, so this difference is easy to understand.

Transportation is recognized as a national—although not exclusively national—problem by most State Planning Boards.¹¹ The words of the Kentucky Report in this connection are worth quoting: "The broad-gage pattern of a transportation system which would be balanced with transportation demand should be appropriately developed by a national agency; within the framework of a basic national pattern, the State could be expected to fill in the details harmoniously and intelligently."

The Missouri Board carries the point a step further by commenting that a clear national policy must precede State action. "So many interstate factors are involved in the transportation problem that adequate national regulation is an essential requisite to any well-conceived system of intrastate regulation and control. Clarification of national transportation policies, with particular reference to regional consolidation of railroads, rate structure, and other basic facts involved in unification, is a most important preliminary to State planning of transportation at this time."¹² Another proposal for railroad unification comes from the Pacific Northwest.¹³

The Wisconsin Report thoughtfully suggests a division of the functions of planning for transportation between the levels of Government. "For example, the matter of terminal facilities and their improvement, although highly important to the State, is essentially a problem that must be studied and solved locally. The matter of railroad consolidations, in contrast, involves such considerations as policy and financial structure of railroad systems whose lines traverse several States * * *. Wisconsin, like any other State, is primarily interested in the adequacy, efficiency, cost and permanence of the service its shippers are receiving and may reasonably expect to receive in the future from the railroads."¹⁴

A few other functions have been classified as exclusively or practically national by various Boards. Airways are usually held to be an exclusively national

problem.¹⁵ The Pennsylvania Board comments that the majority of oil pipe lines in the Keystone State are parts of an interstate system.¹⁶ The Minnesota Board believes that it has "only a secondary part to play" in water transportation projects since they "are largely national in scope."¹⁷

New York, in contrast to New England, wonders "whether the entire subject of pollution of interstate waters should not be taken over by the Federal Government. The matter could then be approached from the point of view of dividing the cost of correction among the Federal Government, the States, and the communities affected."¹⁸ Washington notes that flow control is "a problem on which Federal, State and local governments must cooperate."¹⁹

Summary

The best summary of the relations of Federal and State planning agencies can be taken directly from the New York State Planning Board. "A plan for the development of the resources of a State should be coordinated with a larger regional or national plan. This presupposes the existence of a national authority (such as the National Resources Board) that will determine national land policies, and sketch the outlines of a national resources plan. There should be a broad framework of national planning to insure wise State planning.

"Broad national policies in relation to the use and conservation of all national resources would give direction to the planning of the State's resources. National planning would show in a broad way the Nation's requirements in relation to land use for agriculture, for timber production, for watershed protection, for recreation. It should formulate general policies in relation to the use of the land that is now submarginal for farming purposes, and in relation to the gradual relocation of families living on such lands, or elsewhere permanently stranded without prospect of occupational opportunity. It should formulate the basis and lay down the main lines of a coordinated national transportation system—rail, highway, water, and air. It should prepare a long-term program of public works.

¹¹ Kentucky Preliminary Report, *op. cit.* p. 21, Progress Report, Kansas State Planning Board, September, 1934, p. 20. Preliminary Report of Arkansas State Planning Board, Sept. 10, 1934, pp. 250-253. Preliminary Report, Pennsylvania State Planning Board, p. 498, December, 1934.

¹² Preliminary Report, Pennsylvania State Planning Board, p. 495, December 1934.

¹³ Report, pt. II, Committee Reports, Minnesota State Planning Board, November, 1934, p. 138.

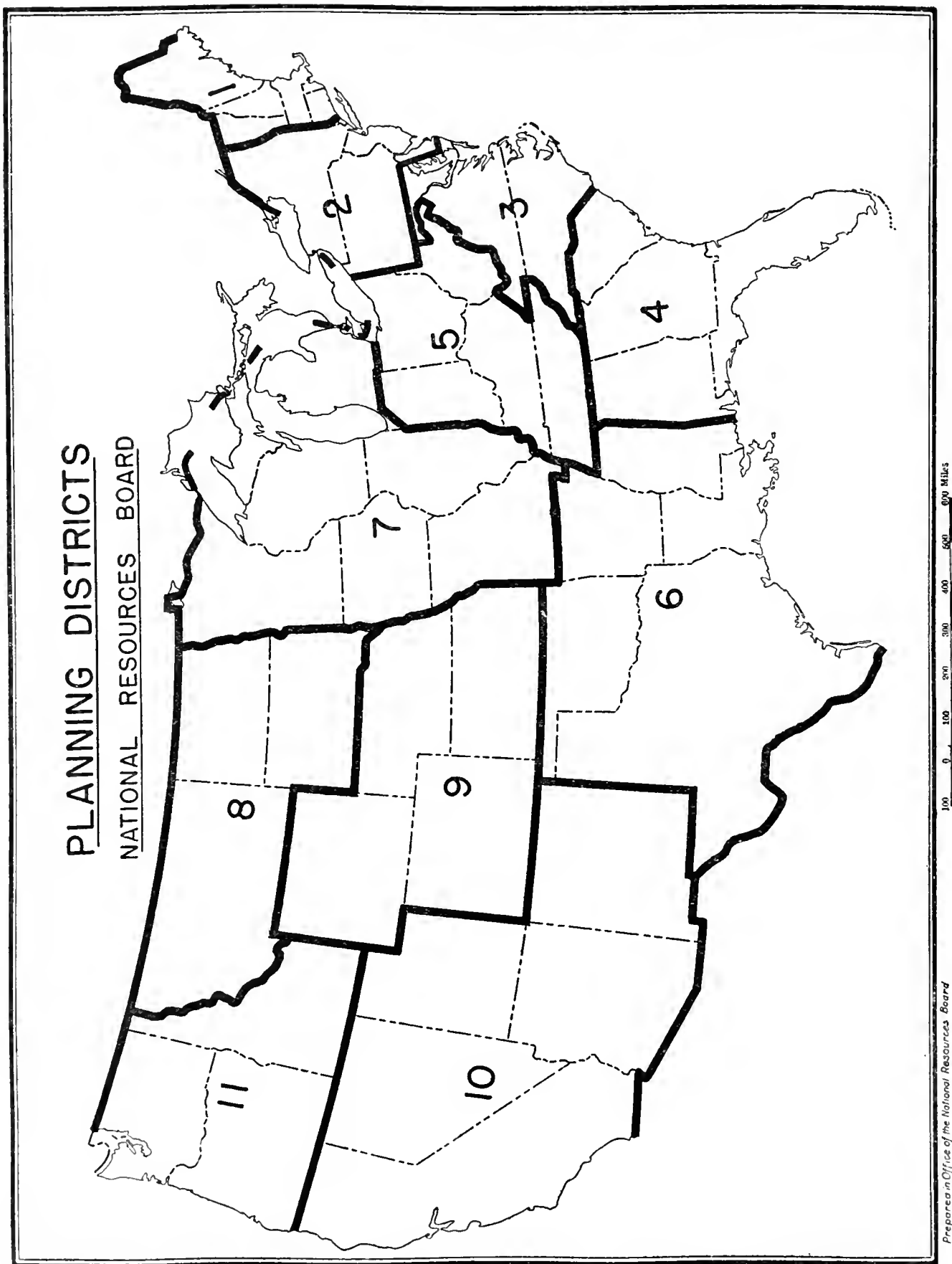
¹⁴ See, e. g., Preliminary Report as a Series of State Planning Studies, Kentucky State Planning Board, September 1934, ch. V, p. 2.

¹⁵ State Plan for Missouri, Preliminary Report, pp. 41-42.

¹⁶ Consultants Report on Regional Planning the Pacific Northwest, January 1934, January 1935, pp. 107-108.

¹⁷ First Biennial Report, State Planning Council, Feb. 23, Sept. 30, 1934.

¹⁸ Regional Plan Report, 1934, pp. 430-431.



"National resources planning will in turn be given form and reality by proceeding in close correlation with State planning. In other words, national and State planning need to be carried on concomitantly. They are really parts of a single process."¹

¹ New York State Planning Board, Progress Report, September 1934, ch. 1, pp. 1 and 2.

INTERSTATE RELATIONS OF STATE PLANNING BOARDS

There is little need to labor over the often repeated point that State boundary lines are not coextensive with economic and physiographic divisions of territory. There is frequent need for interstate planning which does not always mean national planning. State Planning Boards have met this difficulty or propose to meet it in several ways.

District Chairmen

To facilitate public works projects involving more than one State the Public Works Administration in 1933 established the offices of Regional Advisors in 12 regions over the United States. These regional advisors were requested to cooperate with the National Planning Board to secure regional plans, planning judgment on public works projects and cooperation from State officials. When the Board suggested to the governors of the States the possible usefulness and functions of State Planning Boards, it was the regional advisors—later called district chairmen—who met with the governors, State officials, and citizen groups to explain the idea and to work out methods of procedure.

The National Resources Board revised the grouping of States into 11 planning districts and continued a number of the regional advisors as district chairmen. The district chairmen have utilized a variety of methods to secure interstate cooperation among the planning boards in their respective districts. In one case frequent visits and meetings with the separate boards have provided contact and cooperation. In another district such personal conferences have been supplemented by occasional meetings of the consultants or other representatives from all of the State Planning Boards in the area. In two districts formal regional planning commissions have been set up at the instigation of the district chairmen. The National Resources Board has left the exact method of cooperation to its regional representatives.

Regional Planning Commissions

Most attention has been centered on the two regional planning commissions established in the Pacific Northwest and in New England. While they are more fully described in the reports of the commissions and in the

With this statement—that regional and local planning "need to be carried on concomitantly" with Federal and State planning—the New York report completely expresses the theory of intergovernmental cooperation which the State Planning Boards have been so ably developing.

forthcoming report of the committee on regional studies of the National Resources Committee, a brief description of them is needed to round out the picture of intergovernmental cooperation developed by the State Planning Boards. The Pacific Northwest Regional Commission was organized on January 12, 1934, to handle problems which were too broad for the States of Washington, Oregon, Montana, and Idaho, its constituent parts. On March 2, 1934, the New England Regional Planning Commission was organized. The former grew out of the desire of the people of the region to develop themselves commercially and industrially as rapidly as possible. The latter came from a long-developed tradition of planning and of regional consciousness most noticeable in the functioning of the New England Council.

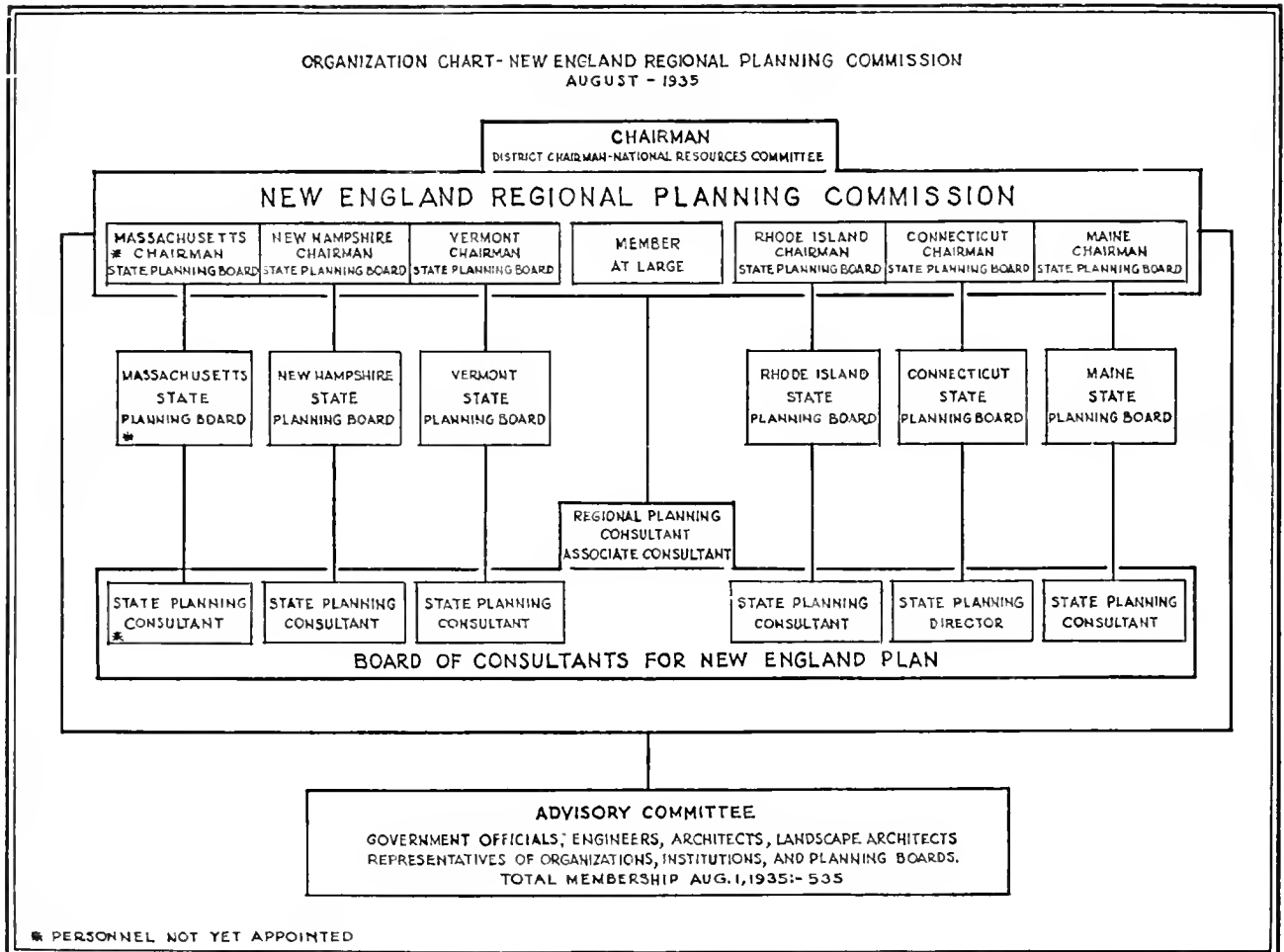
Organization of Regional Planning Commissions

The New England Regional Planning Commission consists of a chairman for the region, 2 members at large, and 5 chairmen of State Planning Boards. There is a regional consultant and associate consultant whose functioning integrates the work of the State consultants. In addition a large advisory committee of 500 persons links many civic organizations of the States to the regional planning commissions.

Contacts between the National Resources Board and the State Planning Boards are direct and not through the Regional Commission. Various members of the Commission question the desirability of this mode of procedure.

The Pacific Northwest Regional Planning Commission similarly consists of a chairman and members from the four State Planning Boards. A regional planning consultant staff gives the central point of view, while representation of State viewpoints is assured on the advisory technical committee²¹ which consists of divisional committees on land, water, and mineral resources, transportation, industry and commerce, utilities, public works, public credit and finance, legislation and education, public welfare, and community, city, and county planning.

²¹ Pacific Northwest Regional Report, 1935, p. 34.



Procedure of Regional Planning Commissions

Regional planning commissions have endeavored to develop a cooperative attitude in their relations to the State Boards. As a result, State Planning Board reports show keen interest in the experimental work of the regional commissions. The Connecticut consultant recommends that, so far as possible, regional plans follow after State plans, but sees no objections to a preliminary regional survey.²² He also makes the excellent suggestion that the State boards be furnished copies of correspondence from the regional office to agencies within the State. If regional and State planning agencies are to function side by side, each must know what the other is doing.

Since the region is not a functioning governmental unit, the problem of how to carry out a regional plan becomes difficult. In this connection value may lie in the suggestion of interlocking memberships in the planning commission and executive departments of State governments.²³ Much regional planning can then be accomplished by interstate administrative agreement.

Another important technique which regional planning commissions may use to instrument their activity is the interstate compact, which, if approved by Congress and the States concerned, has the force of law. New Englanders have announced their preference for this method of planning instead of Federal control. The chief difficulties with interstate compacts are like the chief difficulties with treaties between nations—unanimous consent must be secured and subsequent legislative satisfaction is a tedious process.

Functions of Regional Planning Commissions

Regional planning is still in a highly experimental stage but a number of functions have been suggested. The Pacific Northwest Regional Commission has proposed²⁴ that where problems are interstate, regional committees may assume more primary responsibilities and may act as clearing houses for material.

Pollution problems of interstate streams are one field in which regional planning, or some form of interstate action seems necessary. The Connecticut and Merrimack Rivers have both come under consideration of the New England Regional Planning Commission and an interstate compact has been suggested as the best solution.

Development of power and flood control has been suggested as a subject of regional study.²⁵ Recreation, highways, wildlife, and a number of other planning problems have important regional aspects.

²² Condensed report on planning for Connecticut State Planning Board, October 1934, appendix, p. 7.

²³ Pacific Northwest Regional Report, 1935, p. 42.

²⁴ Report, 1935, p. 35.

²⁵ New England Regional Planning Commission Progress Report, Oct. 1, 1934, p. 3.

Federal Authorities and Regional Planning

The question of relationship of Federal authorities to regional planning commissions is one which will excite much interest if the regional planning idea continues to develop. The New England Regional Commission has already expressed its opposition to bills for a Merrimack Valley Authority and Connecticut Valley Authority and expressed its preference for interstate compacts.²⁶ While opposition to a Federal authority might not be so marked in other sections of the country, it is clear that the regional planning commission should be consulted on such a development and the authority should be closely connected with the planning commission. Membership of regional and State planning officials on the authority directorate might provide one means of contact. Provisions to that effect have been included in a number of bills to establish authorities. Unless some such device is worked out, the functions of the planning commission will be greatly handicapped.

Other Suggestions for Interstate Action

In areas where regional activity has not been organized, a number of suggestions for interstate action have been made by the planning boards. Among them are suggestions for uniform action on family law;²⁷ regulation of water levels in Lake Tahoe;²⁸ cooperation in country planning in the New York area;²⁹ joint action of Maryland and Virginia to conserve the oyster industry of Chesapeake Bay.³⁰ Coordination of plans for the construction and improvement of interstate highways is another important suggestion raised in Oregon.³¹

Role of State Planning Boards in Interstate Relations

In interstate, then, as in intrastate affairs, State planning boards are playing a relatively new role in the American governmental drama—the role of cooperation. The States as a whole are awakening to the importance of cooperation. An excellent example of this is the formation of commissions and committees on interstate cooperation by 23 States in the last few months. National associations of State officials like the American Legislators' Associations, the Council of State Governments, the Governors' Conference, and the Association of State Liquor Administrators, are actively furthering schemes of cooperation. The State planning boards, joining with these other agencies, can do much for interstate planning.

²⁶ Water Resources Committee Preliminary Report, Apr. 18, 1933.

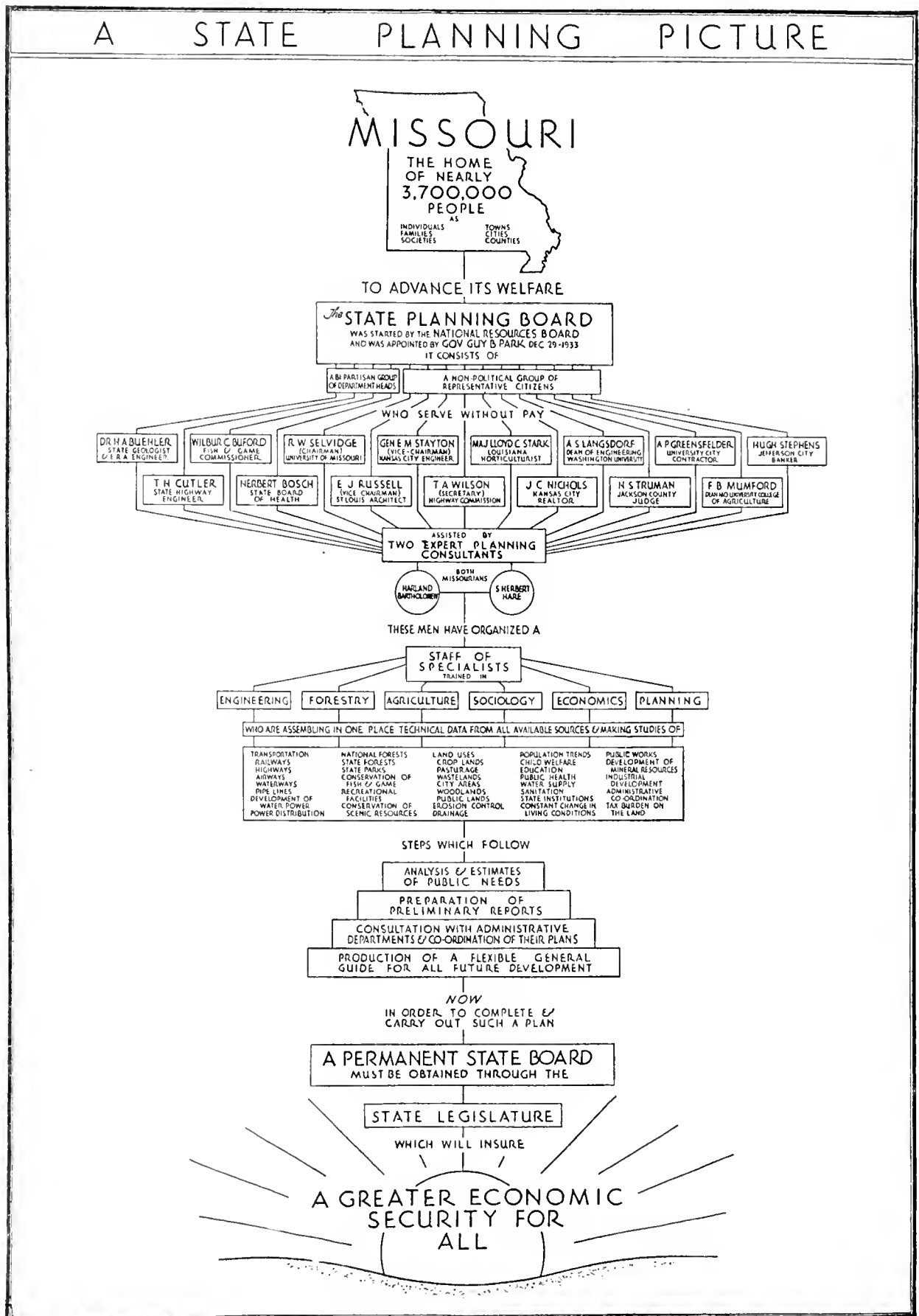
²⁷ Missouri State Planning Board, Preliminary Report, 1934, p. 52.

²⁸ Report of California State Planning Board, 1934, p. 65.

²⁹ New Jersey State Planning Board, Preliminary Report, Mar. 30, 1935, vol. 11, p. 13.

³⁰ Maryland State Planning Commission, 1935, ch. 11.

³¹ Six Months' Progress Report, July 1934, January 1935, Oregon State Planning Council, vol. III, p. 166.



STATE PLANNING AND STATE GOVERNMENT

One of the essentials to effective State planning is cooperation between planning organizations and other branches of the State governments. Planning boards must rely on support from large numbers of citizens, from governors, and from State legislators. They also must rely on the departments and executive agencies of the State government for basic data, development of unified plans and policies, and for sympathetic execution of plans.

Sources of Support

Legislatures

The seat of power in State government is the group of elected representatives of the people—variously called the legislature, general assembly, and general court. Since most planning must rest on a legal basis and the State legislatures usually have power over both State and local legislative matters, it is clearly important that the legislature should understand the approach and method of planning.

On the whole the legislatures have been friendly to the planning movement. Thirty-two States have established planning boards by legislative action. Nineteen State legislatures have provided financial assistance to planning boards. In view of the infrequent meetings of some legislatures, the short time since the inauguration of the State planning movement, and the fact that the planning movement coincided with a drive for reduction of State departments, this record of legislative support is very encouraging.

There is still a need, however, for more active co-working between State planning staffs and State legislatures. Very few persons with legislative experience are listed on the membership of the boards, and while this may be due to reluctance of planning boards to become involved in politics, the explanation does not solve the problem. Some definite means of contact between legislature and planning board is desirable.

In many States the suggestion made in the Virginia Progress Report of creating a governor's advisory council on legislation could well be considered. This council will include leading members of the General Assembly and of the State administration and will consider among other matters all legislation affecting State planning and its coordination with national planning. The Kansas and Michigan legislative councils and the Wisconsin executive council are similar legislative steering bodies which are proving helpful in promoting planning legislation.

Another way in which closer relationship between legislature and planning board can be established is by the use of the planning board as a source of infor-

mation for the legislature. In the words of the Maine State Planning Board it may "act as a clearing house for State departmental data, and as a control agency to which members of the council and legislature may come from time to time to secure definite, unpartisan information on matters relating to the physical, economic, and social welfare of the State."³² Even in States where an adequate legislative reference service is maintained³³ this function is not likely to be superfluous.

Governors

Chief executives have been even more cordial to the planning movement than have the legislatures. In most of the States, gubernatorial action preceded legislative action. Six governors have made grants from contingent funds to help support the work of the boards. Seven chief executives are themselves serving as members of planning boards. The amount of detail which occupies the time of the average governor makes this cooperation notable. Most governors realize the value to them of an organization designed to eliminate duplication of work between departments, to propose forward steps in State planning and to coordinate activities with other State governments.

Citizens

The principal methods used to assure popular participation in State planning have been the selection of distinguished laymen for membership and the creation of large advisory committees of citizens in various walks of life. In the words of the New Hampshire report: "To aid the State Planning and Development Commission, advisory committees of highly qualified citizens from industry, agriculture, and schools of higher learning have been organized to study and to suggest policies and procedures for special phases of State activities."³⁴

Use of advisory committees to integrate State with local and regional planning is commented upon elsewhere in this chapter. Most American governments have had very little success with citizen participation in government in the past, but experience of planning boards does not lead one to think that this failure will necessarily continue.

An outstanding example of wholehearted citizen participation comes from the West. The California Progress Report comments that lay members have attended board meetings more regularly than official

³² What is the Maine State Planning Board? pp. 3, 4.

³³ See Legislative Reference Manual in volume I, second edition, of the Book of the States.

³⁴ State Planning in New Hampshire, Mar. 15, 1935, p. 20.

members. The Washington Progress Report comments that the council has decided to work through existing agencies wherever possible and not appeal directly to the State for aid in conducting researches. Kansas³⁵ and Wyoming³⁶ both report use of private agencies for research which the States were unable to finance. The Kansas, Virginia, and New York boards have received considerable aid from a foundation prominent in the field of governmental research. (On the east coast, the Virginia Progress Report less enthusiastically finds its advisory-committee system is undoubtedly slower than that of a centralized research and survey office, but the advantage of being able to call into service especially well qualified technical advisers through committees more than offsets the disadvantages.

On the other hand, the New Jersey Progress Report notes that citizen committees have been avoided because of the administrative labor involved in making them effective.

It seems safe to say that the experiences of the planning boards with citizen representation and citizen advisory committees have been most satisfactory. Another year will give more opportunity to determine the most productive technique, but the present results seem to justify much hope for the future.

Relations with State Departments

The most impressive governmental achievements of the planning boards have been their effective interworking with the various administrative departments of State government. This has been accomplished at the suggestion of the National Planning Board, by selecting as members of the Board heads of the main interested departments. Almost all of the important departments concerned with natural resources or public works are represented on the boards in a number of States. In 11 States the boards include representatives of the department of conservation; in 4, of the department of water resources; in 3, of the land commission; in 10, of the State engineer; in 6, of the public works department; in 6, of the department of agriculture; in 8, of the State forester; in 3, of the State geologist; in 19, of the department of health; in 4, of parks; in 18, of highways; in 4, of fish and game commission; and in 9, of the department of education. Names of departments vary considerably in different States, but it is evident that agencies dealing with natural resources are well represented on State Planning Boards.

Other State departments, less intimately connected with conservation of natural resources, have a sprinkling of representation on the boards. Five States have chosen for board membership officials from the department of labor; 6 have appointed financial officers or representatives of boards of control; 2, attorneys general, and 6, representatives of utility-regulating bodies (which, of course, are concerned with physical resources). It is interesting to note that Wisconsin recently expanded its committee to 17 members to permit "better coordination of the activities of more State departments."³⁷

Twenty-two States have included representatives of the State university or technical college.

With this integration of important State agencies, the entire resources of the State governments have been thrown open to the boards. The Connecticut report³⁸ makes the following comment on this point:

"Shortly after our organization we issued a statement which served as an introduction of our work to the various departments of the State and the agencies from which we sought cooperation in gathering data. As an ideal procedure, I would suggest as a first step a letter from the Governor to each department head, informing him of the function and purpose of the Board. The resulting cooperation has been most cordial and gratifying. It is important that the first contact with any department be made by one who can adequately present the case in hand in the broadest terms. Where there is to be consideration of projects involving various departments, or in regard to which various agencies have special information, representatives of their groups are brought into conference. The essentials and the limitations of the project are thus early defined."

Texas has used a somewhat similar procedure in organizing general meetings which might almost be called State government cabinet meetings. "The board has made a practice of inviting heads of departments not represented in the personnel of the planning board, and the representatives of the various Federal agencies in Austin, to all of the meetings. By this method, information not hitherto available is disseminated through a large group."³⁹

To illustrate the extent of this cooperation with a few sample fields, let us begin with the studies of natural recreational areas. The Connecticut Board received cooperation from the forestry survey in a survey of places of scenic and historic interest and from the fish and game commission in legal research pertaining to wildlife.⁴⁰ The Indiana board consulted with State and

³⁷ Milwaukee Journal, June 18.

³⁸ Condensed report on planning in Connecticut State Planning Board, second 9 months, p. 6.

³⁹ Preliminary Report, August 1934, through January 1935.

⁴⁰ Condensed Report on Planning for Connecticut, Oct. 9, 1934, p. 3.

³⁵ Second Progress Report, Kansas State Planning Board, March 1935, p. 4.

³⁶ Preliminary Report, September 1934.

national foresters on a submarginal land problem.⁴¹ The Iowa board secured cooperation from the fish and game commission on a similar problem.⁴² Kansas worked out a State parks program with the aid of the State forestry and fish and game commissions.⁴³

In the field of water resources a different group of State bureaus has offered equally substantial assistance to the studies of the boards. The State Engineer of Colorado prepared a report on irrigation and hydro-electric power.⁴⁴ Wyoming reports that the State engineer's office is cooperating actively in a water conservation program.⁴⁵ California's board commends the State division of water resources for "State planning of a fundamental type."⁴⁶ Florida expresses her desire for a State water authority to handle the same problem.

State highway departments have frequently been ready with plans and always with assistance for transportation planning. The Utah Board notes that⁴⁷ "the transportation plan seemed the easiest for immediate approach because the plans of the State road commission for the next 10 years are very definitely formulated and therefore can be made the basis of this study." California reports with equal enthusiasm⁴⁸: "The services and facilities of this division⁴⁹ have been freely offered to the State Planning Board. One of the most farsighted, brilliant engineers of the central highway office has been assigned to assist in the development of State planning studies."

Indiana expresses hope that "the development of a master plan of the State, made in cooperation with the State highway commission and others, will show existing and proposed highway locations."⁵⁰ The Iowa Board finds much helpful material from the coordinator of transportation of the State highway commission⁵¹ and New Mexico acknowledges the assistance of the highway commission in developing a recreational program for the State.⁵²

Educational and Research Institutions

State educational and research institutions have been extraordinarily generous with their assistance. In the field of agriculture, alone, we find the respective boards acknowledging the assistance of the Connecti-

cut State Agricultural College,⁵³ of the Kentucky Agricultural Experiment Station, of the Idaho Agricultural Experiment Station,⁵⁴ and of the Kansas Agricultural Experiment Station. State universities have contributed to planning in many different ways. The aid of the Oregon State system of higher education is acknowledged by the Oregon Board.⁵⁵ The Bureau of Business Research of Ohio State University has supplied valuable data which materially aided the State Planning Board in developing research on location of manufactures.⁵⁶ The Virginia, Iowa, and many other State boards⁵⁷ make general acknowledgment to the State educational institutions and State departments.

Future Role of State Planning Boards in State Government

Several possible lines of activity within State government may be followed by State Planning Boards. One is the development of a clearing house of general information on State problems. This was foreshadowed by the action of Colorado in assigning the staff of her research and statistical agency—the Board of Immigration—to the newly established State Planning Board. It may be that a number of boards will work out a fruitful relationship with the secretaries of state—who usually publish the State year books—and thus secure adequate public presentation of information about the State.

A more important suggestion can be found in the Minnesota progress report. "The State Planning Board has been able to act as an unofficial cabinet for the administrative departments of the State with respect to questions of emergency relief and public works." The report goes on to suggest splitting the board into a coordinating cabinet and a technical research staff.

On the other hand the California Board reports that some of the strong State departments have questioned the need of a new agency of State government to undertake planning. Governor Cross of Connecticut in his instructions to the planning board in December 1933, advised them not to interest themselves in State building programs since that responsibility lay with the Board of Finance and Control.

These points of view are not as contradictory as they would be if all State governments were alike. When no other governmental coordinating agency is to be

⁴¹ Preliminary Report, 1934, p. 101.

⁴² Iowa State Planning Board Report, April 1935, pt. 1—Land pp. 53-54.

⁴³ State Parks and Recreational Areas—A Report of the Kansas State Planning Board, March 1935, p. 3.

⁴⁴ Colorado State Planning Board, Preliminary Report, August 1934, p. 84.

⁴⁵ Wyoming State Planning Board, Sept. 19, 1934.

⁴⁶ Report of California State Planning Board, p. 24 (1934).

⁴⁷ Preliminary Plan on Transportation, Oct. 9, 1934, p. 1.

⁴⁸ 1934 Report, p. 24.

⁴⁹ Highways.

⁵⁰ Report of the Consultants of the State Planning Board of Indiana for the period ending Feb. 22, 1935, p. 61.

⁵¹ Iowa State Planning Board, a Report of Progress, September 1934, p. 363.

⁵² Progress Report, Apr. 15, 1935, p. 103.

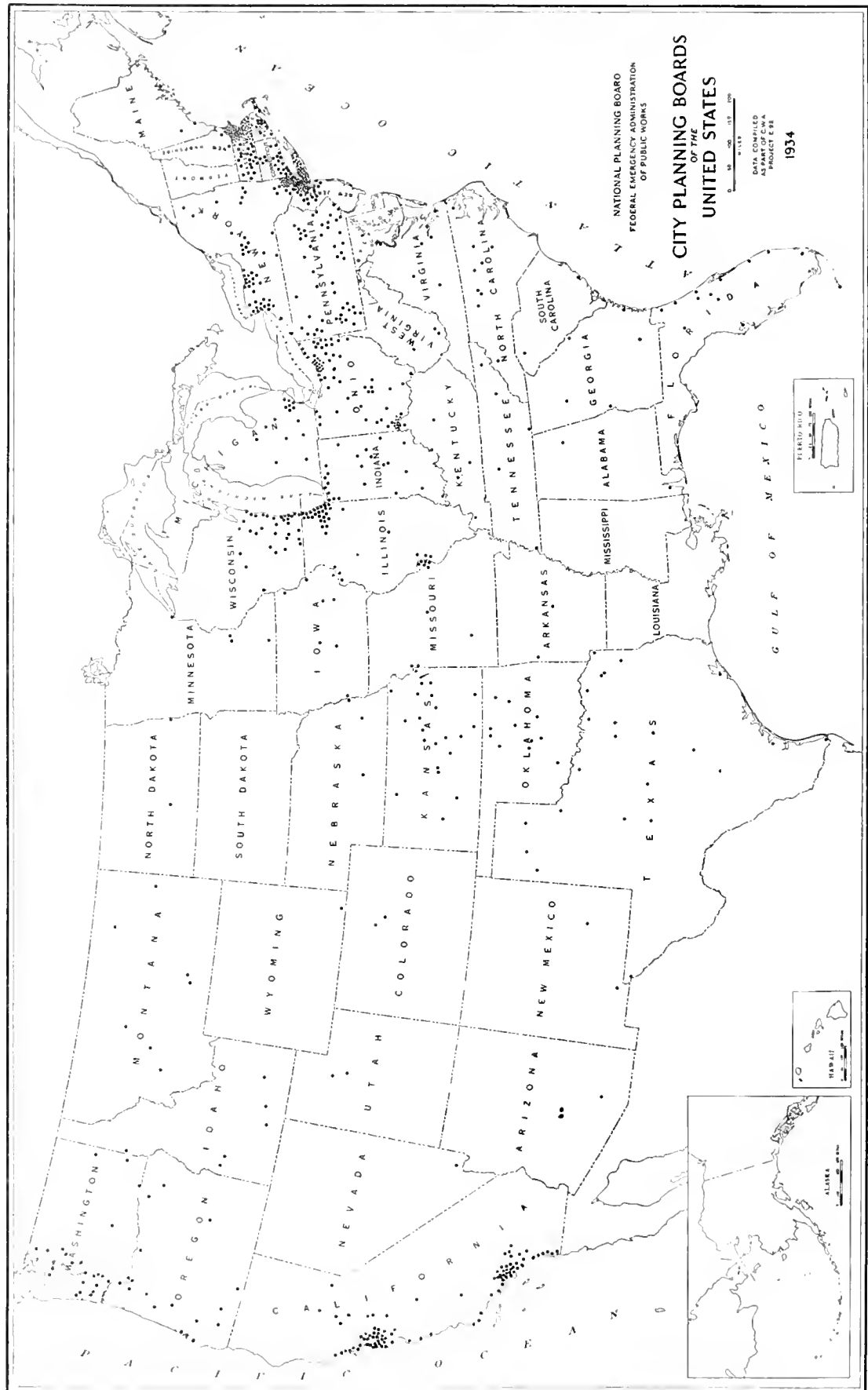
⁵³ For surveys of rural population and rural electrical facilities.

⁵⁴ Research on a rural rehabilitation project.

⁵⁵ Oregon State Planning Board, Six Months' Progress Report, July 1934-January 1935, vol. I, p. 32.

⁵⁶ Preliminary Report on a Series of State Planning Studies—State Planning Board, Aug. 15, 1934, chap. IX, p. 2.

⁵⁷ Progress Report, Mar. 31, 1935, vol. I, p. 7.



found, the planning board may easily assume the function of a cabinet. When other agencies do exist, the planning board can find other fields of coordinating usefulness. At present it is safe to say that most of the

planning boards are performing a highly useful service in integrating the public works and natural-resources program of State and local governments. In that work they fill a long-felt gap in the State organization.

STATE PLANNING BOARDS AND LOCAL GOVERNMENT

Most of the State planning boards have expressed an enthusiastic interest in the work of city and county planning commissions—which is recognized as the basis for State, regional, and national planning. In a variety of ways, the State boards have given material support to local boards.

A quotation from a California report indicates a movement that should develop into a most important type of assistance. "It is part of the work of a State planning board to subject the problems of urban blight and decay to intensive study and to assist municipalities to develop proper improvement plans and to inaugurate reforms in housing and zoning codes which will tend to stop the spread of blight in newer districts."⁵⁸

Present Status of Community Planning in the United States

In its eleventh circular letter of May 15, 1934, the National Planning Board reported that at that time there were 739 city planning boards located in 43 States and the District of Columbia. Of the States having the largest number New York reported 112, Massachusetts 109, California 87, and Ohio 54. Not more than 60 planning boards had reasonably adequate appropriations. In 218 cities, comprehensive city plans had been prepared. Of these 218 plans, 163 had been officially approved by the city planning board, and 105 of the latter had been adopted by the city council.

There were 85 county and regional planning organizations in the United States, a majority of which were located in the environs of the larger population centers. Six of the county and regional planning agencies reported comprehensive plans prepared while nine had comprehensive plans in preparation. Others were devoting their energies to one or more of the particular phases of planning such as thoroughfares, zoning, recreation systems, and land subdivision control.

No more recent compilation of the status of community planning agencies in the United States is yet available. When a new one is completed it will be interesting to observe the effect of the stimulation of community planning by the State Planning Boards.

Federal Support of Local Planning

The National Resources Board and its predecessor, the National Planning Board, have reiterated a belief in local initiative and local participation in planning

endeavors. The stimulation of city and regional planning was one of the primary functions of the National Planning Board and it consistently cultivated contacts with local planning agencies. The importance of city and regional planning to the whole national planning process was recognized in familiarizing people with planning ideas and procedure and in filling in the special details of the larger State, regional, or national planning outlines. Although a new impetus to local planning may be provided by direct financial and personnel assistance from the Federal Government, the long-range undertaking of stimulating, advising, and guiding local planning effort is the proper function and responsibility of the State and local planning boards and civic organizations. The healthy growth of city, county, and regional planning must ultimately rest on local interest, initiative, and responsibility.

The National Planning Board pointed out that a national planning agency, serving as a clearing house, can and should be in a position to render assistance through circulars and bulletins on standards, procedure, and experience which may be generally applicable throughout the Nation. Among the activities of this nature, undertaken by the National Planning Board, are (1) an extensive survey started in September 1933 to determine the status of planning work by city, county, and regional planning commissions (referred to at the beginning of this paper) and (2) a survey of the extent to which local planning agencies were availing themselves of Civil Works Administration assistance for planning studies.

When the National Resources Board succeeded the National Planning Board it continued the cooperation with and encouragement of local planning, and recommended that the individual State Planning Board provide stimulation and assistance to local planning agencies as one of their major activities.

State Planning Board Support of Local Planning

State Planning Boards have supported local planning through the distribution of helpful information and publications, the promotion of planning enabling legislation, and assistance in the organization of local planning boards.

Distribution of Local Planning Information

State and Regional Planning Boards have prepared and distributed publications supplying local planning

⁵⁸ Report of California State Planning Board, 1934, p. 61.

information. For example, the Pacific Northwest Regional Planning Commission circulated throughout the region a mimeographed paper entitled "County Planning Commissions: Their Organization and Activities." The Washington State Planning Council added a mimeographed paper entitled "Some Notes and Suggestions on County Planning Procedure." The New England Regional Planning Commission has published a bulletin listing "New England Organizations Interested in Planning", while the South Dakota State Planning Board has prepared a directory containing, among other information, a list of the county planning board committees in the State.

The New Hampshire State Planning Board in 1934 published a booklet entitled "Town and City Zoning and Planning Primer." The board found it was beyond the scope of its activities to make detailed plans for local communities, but prepared the Town Planning Primer as an aid to local authorities. There was no legal basis for town planning in New Hampshire, but the board felt that under the zoning enabling act communities with the assistance of the primer might be able to make comprehensive plans upon which to base and budget public improvements until legislation would permit the establishment of official planning agencies.

Promotion of Local Planning Enabling Legislation

With few exceptions, the power to enact planning legislation rests with the 48 State governments. If a State board can secure comprehensive zoning and planning acts, it is rendering valuable assistance to all local units. The board's strategic position as a part of the State government places it in a position to furnish an important aid to city and county planning. Illustrations of the activities of State Planning Boards in promoting, drafting, and assisting in securing the passage of enabling legislation essential to successful local planning are numerous.

The Indiana State Planning Board reports, as one of its activities, drafting and securing the passage of an enabling act authorizing counties to appoint planning commissions and to adopt zoning ordinances, and revising the city planning enabling act. The New Hampshire State Planning Board prepared and had introduced into the 1935 legislature an enabling act to provide for city and town planning, which was passed and approved on April 20, 1935. The New Jersey State Planning Board lists, among its accomplishments, the stimulation of county and municipal planning through new legislation and through the formulation of working procedures for local planning boards. The New York State Planning Board has recommended that present legislation authorizing county planning be

strengthened and that counties be granted broad zoning powers.

An illustration of the value of this work can be found in the progress report of the Tennessee Planning Commission, which remarks that counties and cities function under special legislative acts which make comprehensive planning accomplishment difficult. The commission has succeeded in bettering this situation by aiding in securing the enactment of the following measures in the 1935 session of the legislature: (1) State planning act, (2) municipal planning act, (3) regional platting and subdivision act, (4) municipal platting and subdivision act, (5) county zoning act, (6) municipal zoning act. The Pacific Northwest Regional Planning Board has sponsored local planning legislation, and accomplishments of the Washington State Planning Council include the introduction and passage at the last session of the legislature of a bill permitting the creation of city, county, and intercounty planning commissions.

Organization of Local Planning Boards

In most parts of the country, State Planning Boards have been successful in promoting the organization of local planning boards.

From Arkansas come reports of success along these lines through the cooperative efforts of the State Planning Board and the Arkansas Municipal League. The Florida State Planning Board reports that county planning councils, as well as numerous municipal planning boards, are being organized. The Indiana State Planning Board reports, as one of its major activities, the stimulation of greater interest in local planning, which the board considers an integral part of State planning. In Kansas, largely through the stimulation of the State Planning Board, local planning committees—unofficial, it is true, but nevertheless influential and effective—have been organized in three counties and have already completed satisfactory preliminary reports. Similar work is under way in three more counties. Other local planning committees will be organized as rapidly as resources and time will permit.

The Missouri State Planning Board has helped in the creation of county planning agencies although practically no funds are at present available for financing local planning. Fifteen county planning boards have recently been appointed and more will be created soon. Some of the county boards are already at work collecting information through volunteer services, thus securing an essential background for county plans and programs.

The most striking example of success in this field is reported by the Pacific Northwest Regional Planning

Commission. A majority of the 226 local planning agencies now in existence in the region have been created as a direct result of the promotional work of the commission. Evidences of popular support of the Idaho State Planning Board's objectives are seen in the fact that 100 percent of the counties and 76 percent of the cities and towns have recently organized local planning boards, and that the legislature has enacted comprehensive laws supporting State and local planning. The Idaho State Planning Board⁵⁹ has not attempted to outline detailed procedure for local boards but has urged them to determine their own procedure on the assumption that their superior knowledge of local situations is a most important qualification. The State Planning Board stands by to coordinate local activity and to receive from the local units their recommendations on the local and regional elements of the State plan.

The Montana State Planning Board has divided the State into 12 districts, each having a representative on the advisory planning council of the State Planning Board. Each district councilor is responsible for stimulating the organization and activity of county and municipal planning agencies within his district. Of the 56 counties in the State, 47 have county planning boards, which were active during the past 12 months. Accomplishments of the Oregon and Washington State Planning Boards also include the stimulation and assistance of local planning organizations.

Cooperation—State and Local Planning Agencies

Another suggestion from California is that "the State Planning Board can become the mentor and guide of local planning groups in avoiding planning activities of an unworthy and highly impractical nature."⁶⁰ Kansas comments with pride on the Report of the Geary County Planning Committee. This planning agency was the result of the efforts of the State board to form a local planning body.⁶¹

To give a few other examples, the New Jersey Progress Report notes that the State board has assisted in organization and formulation of working procedures for local planning boards. In another place, the New Jersey board comments that "mutual benefit could be realized from further expansion of the county planning program."⁶² New Mexico reports cooperation with cities in encouraging establishment and development of urban recreational programs.⁶³ The New York State Planning Board is preparing a guide for organization and operating local planning bodies.

The Connecticut State Planning Board has conducted a wide variety of studies in which State and municipal agencies were jointly interested. Among these studies was a garbage and household waste disposal survey made, in cooperation with the State water commission, in every municipality in the State with a population of 2,000 or more. As a result, it recommends⁶⁴ a comprehensive study of urban housing congestion and of urban and suburban recreational facilities. The Indiana State Planning Board⁶⁵ recommends cooperation in the development of legal authority which could provide for the reconstruction and re-planning of large areas in cities, which are now partially or entirely unsuitable for modern living and which are an economic drain on the community. The Iowa State Planning Board reports substantial progress in the coordination of local planning efforts and an increasing tendency to utilize the data and material assembled by the Board, and to consult it in connection with local plans. A county zoning enabling act, recently adopted by the Michigan Legislature, requires the collaboration of the State Planning Board with the counties in the development of county zoning ordinances. The Missouri State Planning Consultant recommends the cooperation of the State Planning Board and the cities and towns of the State in the preparation of an adequate record of existing land use. The report points out that such a record would be useful as a basis for the design of public works, establishment of building regulations, preparation of zoning ordinances, and general planning purposes. It would afford opportunity for the employment of a considerable number of men with or without technical training.⁶⁶ The Missouri Planning report⁶⁷ suggests cooperating with cities in encouraging the establishment or further development of such urban recreation facilities as parks, playgrounds, auditoriums, and gymnasiums.

Urban Studies by State Planning Boards

In some cases State Planning Boards have made urban planning studies, sometimes as demonstration projects, and sometimes because the urban problems had a direct bearing on State planning.

The California State Planning Board⁶⁸ has recommended studies of the cost of inadequate flood protection in urban districts and a determination of the policy of the State in the treatment and use of lands lying within or in close proximity to flood channels. The Indiana State Planning Board suggests a study

⁵⁹ Idaho State Planning Consultants' Six Months Progress Report, June 5-Dec. 5, 1934, p. 4.

⁶⁰ Report of California State Planning Board 1934, p. 73.

⁶¹ Second Progress Report, Kansas State Planning Board, March 1935, p. 3.

⁶² Preliminary Report, Mar. 30, 1935, vol. II, p. 14.

⁶³ Progress Report, State Planning Board, Apr. 15, 1935, p. 104.

⁶⁴ Condensed Report on Planning for Connecticut. State Planning Board, Oct. 1934, p. 6.

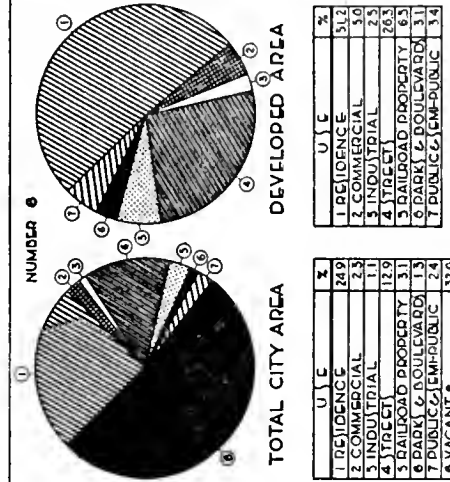
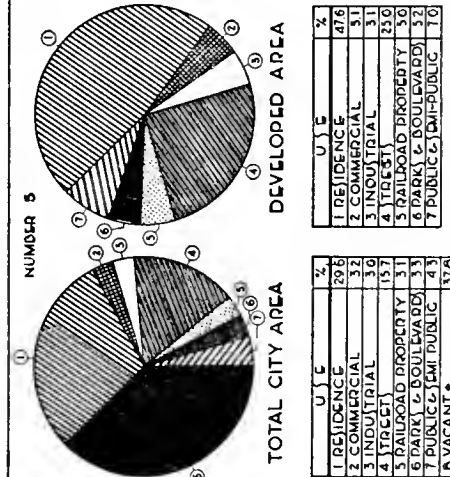
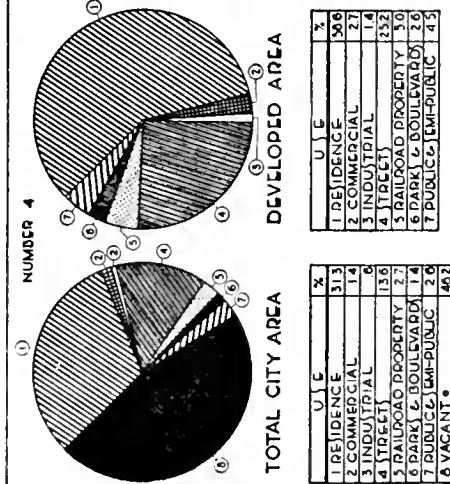
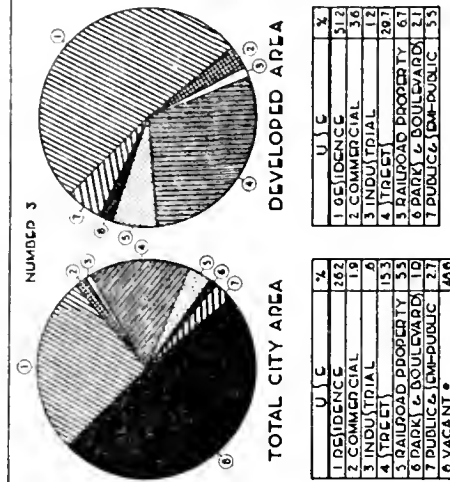
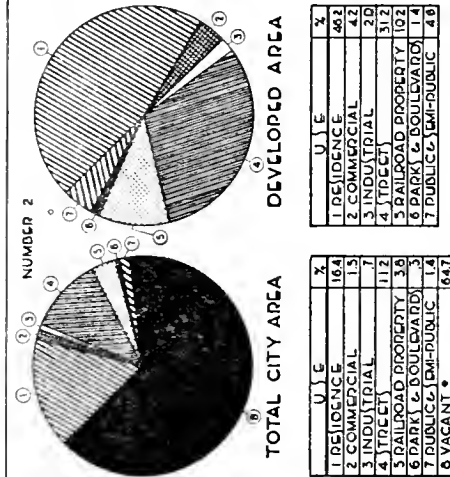
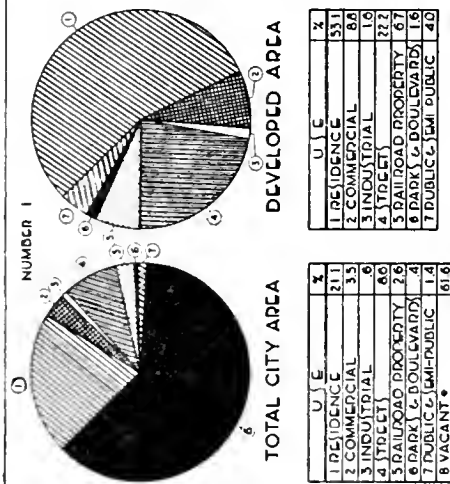
⁶⁵ A report of the consultants of the State Planning Board of Indiana for the period ending Feb. 22, 1935, p. 11.

⁶⁶ Preliminary Report, 1931. Missouri State Planning Board, p. 74.

⁶⁷ Progress Report, Missouri State Planning Board, Apr. 15, 1935, p. 104.

⁶⁸ Report of California State Planning Board, 1934, p. 61.

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of the plotting of land about cities and its effect upon housing, including sanitation and economic and social factors.⁶⁹ The board made demonstrational studies in five typical counties to reveal the history of public works development, future needs, and possible methods of finance. It also made studies of housing in cities, particularly with reference to slum districts. The Iowa State Planning Board⁷⁰ undertook a number of urban planning studies, including town, village, and city housing, health, industry, and business zoning. These studies have demonstrated the need in Iowa communities for: (1) Zoning measures to restrain towns of the second class, particularly, from further haphazard developments within their boundaries; (2) reducing the excess of land now wasted in commercial areas; (3) building and providing for light industries; (4) increasing recreational areas, both urban and rural; developing within the counties and within the State a more equal distribution of diverse recreation facilities. In New Hampshire a general survey of housing conditions in 12 New Hampshire towns was made in order to determine the need for new housing. Standards of minimum and good housing were set up by which to measure existing conditions. The capacity of the people to pay for adequate housing was also taken into consideration. From the data produced by this survey the commission concluded that with the amount of land surrounding these cities available at low price, and with reasonable costs for labor and materials, there is no reason why every person now forced to live in a substandard dwelling should not be well housed, within his capacity to pay, and within easy access to his work. The New Jersey State Planning Board made a preliminary study of possible future land utilization, indicating the areas now used for urban purposes, and the areas of most probable urban expansion. This is being supplemented by a special study of the economics of controlled and well-planned land subdivision, which will be used as a demonstration to municipalities of the importance of using the subdivision regulation powers delegated to them by the legislature.⁷¹ Following a survey (made in cooperation with local agencies) of slum conditions in Providence, the Rhode Island State Planning Board prepared detailed plans for a slum clearance project and a new housing development which was submitted as a self-liquidating project to the Public Works Administration. The Utah State Planning Board made studies for county zoning, and for a Salt Lake-Ogden regional plan. The Vermont State Planning Consultant undertook studies which

aimed to classify towns according to their patterns of growth or decline. He also made revenue studies for each town in the State, analyzing its population, sums spent for relief, property valuation, tax rate, tax delinquency, tax indebtedness, and cash on hand. One of the accomplishments of the Wyoming State Planning Board has been a preliminary survey of municipal water supply and sewage disposal plants in all of the principal cities and towns of the State.

State Planning Boards as Clearing Houses

One of the aims of popular government has always been to encourage as much decentralization as possible without loss of expert knowledge. To use the oft-quoted phrase of John Stuart Mill: "Knowledge should be centralized and power should be decentralized." To foster development of local initiative in planning and yet to assure worth-while services, some of the State boards act as clearing houses of information and governmental services. Idaho reports that the Oneida County Planning Board "has initiated and consummated a hundred thousand acre submarginal land purchase project involving 123 families."⁷² The land-planning consultant of the State board arranged for cooperation of the local unit with the Agricultural Adjustment Administration. The Kansas State Board has served as a clearing house for local officials and reports valuable services to county poor commissioners and county school superintendents.⁷³

The responsiveness of local officials is of course very important if the clearing-house service of the planning boards is to be worth while. Despite some difficulties, most local officials seem cooperative.⁷⁴ Iowa notes "an increasing tendency on the part of local officials to utilize the data and materials assembled by the board and to consult it in connection with local plans."

Intercounty Organizations

There has been much talk of county consolidation and "supercounties" in the last few years but it has remained for the State planning boards to bring groups of counties into actively cooperating units. Sometimes the State Planning Board has divided the State into districts for its own convenience, as in the case of Texas which designated four agricultural regions.⁷⁵ Wisconsin has followed its industrial commission in utilizing nine "economic districts" for fact-finding purposes.⁷⁶

⁶⁹ Progress Report, December 1934, p. 3.

⁷⁰ Kansas State Planning Board, Rural Schools in Kansas Report of March 1935, p. 9.

⁷¹ Ohio State Planning Board, Progress Report, March 1935, pp. 293-294.

⁷² Preliminary Report, Texas Planning Board, August through January 1934-35.

⁷³ Wisconsin Regional Plan Report, 1934, p. 75.

⁶⁸ Indiana State Planning Board. Preliminary Report, 1934, p. 162.

⁶⁹ Iowa State Planning Board. Progress Report, September 1934, pp. 347-349.

⁷¹ Preliminary Report, Mar. 30, 1935. New Jersey State Planning Board, vol. II, p. 1.

More potent than these subdivisions have been the planning districts which the Idaho Board has been particularly successful in creating. Groups of counties have been organized into eight districts which conform more or less to natural drainage areas. The district planning boards have representatives from both city and county boards. Similarly, Montana is divided into 12 planning districts, each comprising several counties. Each county has its own planning commission and the entire district is coordinated by a board made up of members from the various districts. Sometimes joint membership on advisory committees helps to develop cordial relationships between governmental units.

This intercounty device is used even between States. The Idaho State Planning Board reports that "two counties, one in Idaho and an adjacent one in Washington, have an interstate planning district for developing a complete district plan."⁷⁷

While it is unlikely that any important development in political machinery will follow from these intercounty organizations, it is clear that the cooperative spirit, fostered by planning, is developing a high level of activity in these States.

Reorganization of Local Government

The question whether a State Planning Board should concern itself with reorganization of local government is a difficult one. The Kentucky Consultant mentions in his progress report a survey of local government in cooperation with the university. The New Jersey Board has suggested a survey of State and county subsidies for roads and schools.⁷⁸ The Oregon Board is cooperating with an interim committee of the legislature in a study of local government with a view to reorganization and simplification. The results will be well worth watching. Most of the boards, however, seem to feel that the problem of governmental organization does not fall within their sphere of activity.

Is Separation of Functions of State and Local Planning Commissions Possible?

No separation of functions between State and local planners is suggested in the reports. Sometimes a board notes the fact that a State has an interest in a particular planning function, as for instance the development of recreational facilities.⁷⁹ The California Board feels that "there are urban problems which

affect the welfare of the entire State."⁸⁰ The Iowa Board believes that "the city and town will continue to be privileged and responsible in the matter of providing space and facilities for recreation."⁸¹ It seems clear that cooperative activity is likely to continue in this field and that no division of functions will be made. Legislative power to plan, rests with the State. Local units naturally have an interest in plans which affect them. Neither State nor local authority can be eliminated.

An interesting comment on the relative importance of local planning units in different types of States comes from the Pacific Northwest Regional Report.⁸²

"In Montana and Idaho where the principal interests are agrarian, land and water planning have received prime consideration. In these States heavier emphasis has been placed upon district and county organization and activity as a basis for building up State plans. Practically all of the area of these States has been covered by county and district planning organizations.

"Washington and Oregon, with greater diversity and complexity in economic make-up have devoted a greater part of their first planning effort to State-wide work and to functional activities in various fields of planning."

Role of the State Planning Boards in Local Government

Except in a few States in which there are well-developed State departments of local affairs or leagues of municipalities, State Planning Boards have full opportunity to introduce some degree of coordination into local governmental matters. Particularly in those States where various State departments exercise uncoordinated and diverse controls on cities and counties, there is an opportunity for planning boards to try to persuade the State to unify its policy toward cities, or to view them collectively. In States where some coordinating force like a strong league of municipalities does exist, that force will be a valuable ally for the planning boards. One of the most effective State boards, Virginia, has as its chairman the executive secretary of the Virginia League of Municipalities. Under his guidance the league has been a great help to the planning board. The executive secretary of the Michigan League is also a member of his State Planning Board. On the whole, however, it cannot be said that the State Planning Boards have yet made the most of their opportunities in connection with local government.

⁷⁷ Progress Report, December 1931, p. 4.

⁷⁸ Preliminary Report, Mar. 30, 1935, vol. II, p. 45.

⁷⁹ New Mexico, State Planning Board Progress Report, Apr. 15, 1935, p. 104.

⁸⁰ Report, 1934, p. 59.

⁸¹ Progress Report, September 1934, pp. 351-353.

⁸² 1935, p. 147.

PUBLIC FINANCE

Many State Planning Boards included financial studies in their research programs, as being fundamental to the preparation of any State-wide improvement program.

Of the importance of such studies, the Idaho State Planning Board says:⁸³ "Public finance and credit fill an important and well recognized place in the general problem of planning for the State of Idaho or for any other area. While private initiative and private capital must be relied on to carry the bulk of the burden of developing our State, many things must necessarily remain which can be financed only by the State or the local governmental units. Obviously, therefore, information about the present financial status of the State and the local units, and analysis of their future possibilities form a basic part of the planning program."

In Vermont⁸⁴ the planning consultant felt that it was necessary to have data on the financial condition of the towns, and also accurate knowledge of the financial relationship existing between the State and the several towns, as a basis for any thoroughgoing consideration of Vermont problems.

The planning board in Tennessee prepared a 34-page report on the Taxing Ability and Governmental Facilities of Tennessee Counties, setting forth the assessed valuations, tax rate, tax collections and other receipts, the governmental costs, such facilities as roads and schools, and credit ratings for each county.

In Florida the planning board attempted to make such a study, but found that there was no centralized supervision of county and municipal finance accounting, so that the statistics were not comparable. It recommended, therefore,⁸⁵ "that the State auditing department be given the right to prescribe uniform forms for municipal accounting with the supervision and auditing of the same."

In Kansas⁸⁶ the State Planning Board instituted a taxation study which was directed by the income tax department of the State tax commission and performed as a work-relief project. The results were so valuable that the income tax department has employed a full-time statistical clerk to keep the records up to date.

In Maryland the State Planning Commission, the University of Maryland, and the Maryland Emergency Relief Administration cooperated in preparing a report on Certain Financial Aspects of Local Governments in Maryland." In the introduction to the report the chairman of the State planning commission says:

"Its preparation was undertaken upon the assumption that the underlying tax structure of the various local governments controlled in many ways the opportunities for future public activities."

After making a study of the financial status of local governmental units, the Minnesota State Planning Board recommended⁸⁷ "a system of carefully planned control of local expenditures, indebtedness, and taxes that will give due consideration to home rule and which will at the same time prevent local units from going to such extremes that they will impose serious obligations upon the State and also weaken the credit of all units of government."

The report, State Planning in New Hampshire—March 15, 1935, contains a series of charts of trends in types of expenditures, one of which shows that highway expenditures are by far the largest. These increased from \$3,000,000 in 1927 to a high of \$7,750,000 in 1931, then decreased slightly in 1932 and 1933, but in 1934 showed an increase to \$6,600,000. Relief was usually a minor factor, but in 1934 called for expenditure of \$6,000,000. Education required a fairly constant expenditure of from \$1,500,000 to \$1,800,000 per year, and charities, hospitals, and correctional institutions absorbed on an average about \$1,000,000 per year.

In North Dakota the State planning consultant issued a comprehensive Preliminary Report on Taxation, and studies are still being made of the subjects of debt and finances in the counties and municipalities of that State. In Oklahoma the State Planning Board⁸⁸ made use of financial surveys of governmental units previously prepared by the State chamber of commerce and the State university. In Rhode Island⁸⁹ the State Planning Board prepared a map showing the bonded indebtedness and tax rate of each city and town.

Most of the State Planning Boards have reported that problem areas cannot stand new or higher taxes of any kind. In South Dakota, for instance, the board says:⁹⁰ "It is possible that in some of the most financially marginal areas of the State, adjustment must come from the reduction of expenditures, rather than an adjustment of taxation. In fact, it is obvious that such areas cannot support public expense to the extent that they have been expected to support it in the past."

⁸³ Minnesota State Planning Board Report, 1934, pt. II, Report of the Committee on Taxation, p. A.

⁸⁴ Oklahoma State Planning Board, Preliminary Report, Sept. 7, 1934, pp. 114, 115.

⁸⁵ Rhode Island State Planning Board, Report of March 1935, p. 16.

⁸⁶ South Dakota State Planning Board, Progress Report, Mar. 15, 1935, p. 139.

⁸³ Idaho State Planning Board, Progress Report, December 1934, exhibit J, p. 1.

⁸⁴ Vermont State Planning Board, Preliminary Report of Progress, April 1935, p. 7.

⁸⁵ Florida State Planning Board, Apr. 1, 1935, Report of Committee on Taxation and Government, pp. 3 and 4.

⁸⁶ Kansas State Planning Board, Second Progress Report, p. II.

The Michigan board ⁹¹ found that in that State there are 83 county governments, 1,271 township governments, and 6,775 school-district governments. The boundaries of these governmental units are too restricted for the efficient management of the health, recreation, welfare, and education services required of the modern community. In addition many of them are losing population and wealth, so that the burden of providing new services is increasingly difficult. A thorough study of the needs of government and the ability of the people to pay was recommended. The board's conclusion was: ⁹² "More than government itself, the financing of government needs to keep pace with changing social and economic conditions. Only thorough planning and great flexibility can achieve that end."

The Oklahoma State Planning Board ⁹³ found that, while the urban counties had good schools, public libraries, police protection, electric lights, gas service, paved streets, and other services, the counties with low densities of population had few or none of these services and higher tax rates. They found that the small town could not support such services with any reasonable tax rate. Their studies convinced them that: "Obviously, we are face to face with the problem of reconstructing local government."

The following interesting note on this subject comes from the Montana State Planning Board: ⁹⁴ "Montana's governmental, social, and educational structure has been built on the supposition that the same rate of rapid development that occurred between 1908 and 1918 would continue and that the various political subdivisions could support the structure created. A decline in taxable valuations and taxable properties presents a problem that must be approached from two angles: (1) An adjustment in land utilization through proper classification, area organization, and water conservation. If effective it will check tax delinquency, add to the taxable wealth of the State, and spread the tax burden. (2) A reduction in public expenditures possibly through some consolidation, elimination, or simplification of school-district, county, city, and town units and functions. Land as at present utilized cannot meet the tax burden imposed by the support of so many units."

A somewhat different manifestation of the same problem is presented in Washington. The board there says: ⁹⁵ "As the lumber industry moved back into the valleys and into the more mountainous regions the settlers followed—and established homes and pur-

chased farms in these narrow, isolated, shoestring valleys. These areas, in addition to having the handicap of a small size unit, are also a handicap to the rest of the county and State because of the high cost of governmental services such as roads and schools."

New Mexico also found that isolated settlers are costly. ⁹⁶ In our desire for unlimited production we have allowed families to settle on land where a livelihood will never be possible. We have allowed them to settle in isolated places and our county administrations have matched the few tax dollars they received from these isolated settlers with hundreds of dollars to furnish them with schools, roads, general protection, and supervision.

"From the standpoint of public finance there can be little argument. Many of our counties are in such a bad condition that at least this part is clear. Some other way must be found to refinance them if they are to continue. Perhaps this must come through consolidation and elimination of unnecessary counties, but even that does not remedy the main evil."

The New Jersey State Planning Board prepared a map ⁹⁷ showing the number and average area of municipalities in each county, which indicates the inordinate number of existing governmental jurisdictions in the State. From this they formed the conclusion that, "In the interests of better and less costly public service and for more effective control of urban development, a three-point governmental program of municipal and county reorganization is worthy of serious consideration: (1) Elimination of all townships by transfer of rural township area to an extended county jurisdiction or by annexation to or consolidation with existing borough or city units; (2) extensive consolidation of borough and city units in accordance with a sound social, economic, and governmental policy; and (3) the consolidation of counties and readjustment of county lines, in appropriate instances. Such a program is suggested not without recognition of the political and legislative difficulties involved."

Taxation

Present tax systems were the subject of numerous studies by State boards.

The California State Planning Board ⁹⁸ considers the present "haphazard, inefficient and near-sighted" tax system to be one of the chief factors contributing to the present land-use problems. The owners of forest lands, in particular, are forced into harvesting the forest crop on an exploitation basis to avoid the annual

⁹¹ Michigan State Planning Board, Preliminary Report, September 1934, p. 39.

⁹² *Ibid.*, pp. 327, 328.

⁹³ Oklahoma State Planning Board, Preliminary Report, Sept. 7, 1934, pp. 122-124.

⁹⁴ Report of the Montana State Planning Board, Apr. 16, 1935, p. 26.

⁹⁵ Major Land Use Problems and Policies for Washington, Nov. 23, 1934, pp. 2, 3.

⁹⁶ New Mexico State Planning Board, Progress Report, Apr. 15, 1935, pp. 93, 94.

⁹⁷ New Jersey State Planning Board, Preliminary Report, September 1934, pp. 54, 56.

⁹⁸ California State Planning Board Report, 1934, p. 108.

taxes, a practice which would be ruinous over a long term of years.

The State Planning Board ⁹⁹ of Florida has compiled and annotated the taxation laws of their State, and is comparing them with the taxation laws of other States. If this procedure is followed in other States, more uniformity can be expected in the laws on this subject.

In their studies of the present tax structure, the Florida State Planning Board found that, ¹ "one of the most glaring faults has been the inequality of assessments as between counties and as between counties and municipalities and even as between similar properties within the same political subdivisions."

In Kansas the State Planning Board ² cooperated with the department of inspection and registration in an investigation of gasoline tax exemptions, and submitted a report showing that exemptions were accountable for an annual loss to the State of about \$1,125,000 in taxes due.

The Michigan State Planning Board ³ says: "From time immemorial real estate has been the principal subject for taxation, and it continued in that capacity in Michigan until it faltered and all but failed completely as a source of revenue before being relieved."

A map ⁴ prepared by the State Planning Board of Minnesota shows the assessed valuation per square mile and per capita in the several counties of the State. From these maps it may be seen that ability to pay, as measured by valuation of real property, is strikingly different in different parts of the State. The necessity for expenditures for governmental services probably does not correspond to the differences in real property valuation.

"On plate XXXVIII (reproduced on p. 288) is shown a composite measurement of the financial rating of the several counties of the State.⁵ The criteria used in this index include such features as the per capita assessed valuation, the per capita debt, the percentage of uncollected tax levies, the personal income in the counties, and so on, no one of which alone gives a fair measure of ability to pay. Striking differences are to be noted among the counties. There is a strong suggestion from all of this that consideration should be given to the use of relief projects to supplement the income in those counties least able to carry the expenses of needed governmental activities. Any

such suggestion must be considered, of course, together with the possibility suggested by the committee on land utilization appointed by the Governor, that certain portions of the State be entirely depopulated and government expenditures therein be reduced to a minimum."

The committee on taxation, of the Minnesota State Planning Board, listed five tax recommendations: ⁶

"Improved administration of existing taxes (is essential).

"Consideration should be given to important changes in the existing tax system.

"The modification of existing taxes, the adoption of replacement and supplementary taxes, and other adjustments that will render the necessary tax load least burdensome and enable the people of the State to get the most service.

"The general sales tax, or so-called gross income tax, is not recommended.

"The coordination of Federal, State and local functions and taxes and a broad consideration of future needs as well as of present emergency requirements is most desirable."

In the opinion of the State Planning Board of South Dakota; ⁷ "One of the major problems of the State is a desirable system of taxation; one that will provide adequate revenue, but will not cripple any particular industry or interest. Various experiments, aimed at shifting the burden from real estate, have been tried. First was the 2-year trial of the gross income tax, and now the State is to experiment for a 2-year period with a combination gross income and sales tax. The tax problem is also tied up closely with the general problem of public finance."

In North Dakota, where the tax question is no less acute, the State Planning Board made the discovery that: ⁸ "The farmers of North Dakota in 1931 produced farm crops valued at \$52,507,000. The tax burden payable in that year was \$37,327,227. In other words, 71 percent of the total value of all crops raised in 1931 was required for the payment of taxes and special assessments."

The same board reports that: ⁹ "Taxpayers in various parts of the State have called meetings to protest against tax burdens and to ask for relief. Some urge the cutting down of the running expense of local government. This may perhaps be effected in some localities, but a government cannot reduce its expenditures during times of depression just as individuals and corporations do. Governments must continue to exist and function. The greatest local expense is the school burden and any

⁹⁹ Florida State Planning Board, Progress Report, December 1934, pp. 17, 18, and 20.

¹ Florida State Planning Board, Report of Committee on Taxation and Government, Apr. 1, 1935, p. 2.

² Kansas State Planning Board, Second Progress Report, March 1935, pp. xiv-xviii.

³ Michigan State Planning Board, Preliminary Report, September 1934, p. 328.

⁴ Minnesota State Planning Board, pl. XXXVII, Report, November 1934, pt. 1, p. 28.

⁵ *Ibid.*

⁶ *Ibid.*

⁷ South Dakota State Planning Board, Progress Report, Mar. 15, 1935, p. 139.

⁸ North Dakota State Planning Board, Preliminary Report of Mineral Resources, 1935, p. 2.

⁹ Preliminary Report of Mineral Resources, 1935, p. 1.

considerable cut in local expense would necessarily interfere with the present school system." It has been pointed out that the children who are denied educational advantages during 2 or 3 years of financial stringency may have suffered an irreparable injury. Other States have experienced protests from taxpayers, a condition which serves to emphasize the importance of the subject.

Tax Delinquency

The one financial problem which seems to draw the unanimous attention of State Planning Boards is the question of tax delinquency. According to the Minnesota State Planning Board,¹⁰ "Tax delinquency has become a highly disturbing factor in tax income. At the close of 1933 one-fifth of the real and personal property taxes payable that year in Minnesota remained unpaid, and in nine of the counties the rate of delinquencies exceeded 50 percent. * * * From January 1929 to January 1934, a period of 5 years, the total of all uncollected taxes in Minnesota increased \$43,532,631." This board recommended¹¹ "general revision of (certain) tax * * * laws in order to lessen tax delinquency, particularly on the part of those able but unwilling to pay, while safeguarding the rights of those temporarily unable to pay."

A map prepared by the Tennessee State Planning Board¹² showed that in 34 counties, more than 20 percent of the taxes levied in 1932 were delinquent.

In Kentucky,¹³ a C. W. A. project conducted in 61 of the 120 counties, under the direction of the State Planning Consultant, showed an average delinquency of 11 percent. "There were 26 counties above and 35 below this average. Delinquencies ranged from 2 percent to 60.5 percent."

The Iowa State Planning Board says,¹⁴ "In general, the greatest concentration of tax delinquency is in areas where soil erosion is most severe, where overvaluation of land has been most extensive, or where unfavorable agricultural conditions prevail * * *."¹⁵ "As compared to delinquency in 1928 and 1929 a sharp increase is indicated over the entire State. The State average for tax delinquency in 1930 was 22 percent."

The next year showed a decided increase over the entire State.¹⁶ "The State average rose from 22 per-

cent in 1930 to 37 percent in 1931. The greatest increase came in areas severely affected by erosion, overvaluation of land, or unfavorable agricultural conditions."¹⁷ There was a general decrease of 1 percent in tax delinquencies from 1931 to 1932 for the State. However, in the areas in which the highest concentration of tax delinquency prevailed previously, the greatest decrease was due to foreclosure on mortgages by corporations and payment by them of accrued taxes.

The State Planning Report of Missouri points out that:¹⁸ "Tax delinquency is an indication of improper land use. In the future development of a land use program, therefore, a study of the extent and location of tax delinquent lands is of immediate importance."

In Ohio, the State Planning Board¹⁹ reported that: "A study of tax delinquency shows 7 percent of the rural land area tax delinquent in 1928, 8 percent in 1929, 12 percent in 1930, 18 percent in 1931, and 22 percent in 1932." Regarding the distribution of this delinquency, the board says:²⁰ "Every county in Ohio shows a delinquency in tax collection for 1932-33. Twenty-five counties show tax delinquencies of 20 percent or over; 48 show delinquencies of 20 percent or over; 48 show delinquencies from 10 percent to 19 percent; and 15 counties show delinquencies under 10 percent. It may be noted that as a group the counties in the industrial region in the northeast show the highest percentage of delinquency, and that some of the counties containing the cities of the 'one-industry' type, so-called, that grew the fastest in the past decade or so, show the highest delinquencies. How much of this delinquency is attributable to actual incapacity to pay and how much to inefficient methods of collection, it is impossible to say."

The Indiana State Planning Board's Preliminary Report of 1934²¹ contains a map showing the assessed valuation of real estate and tax delinquency by counties. The tax delinquency varies from 9.5 percent to 59.5 percent.

The State Planning Board in New Mexico makes the suggestion that:²² "legislation should also be provided to permit counties to trade tax delinquent lands for other lands owned either by the State or National government." This would permit consolidating such land into units suitable to appropriate use.

¹⁰ Minnesota State Planning Board Report, pt. II.

¹¹ Ibid.

¹² Tennessee State Planning Board, "Rural Land Use in Tennessee", Nov. 30, 1934. County map no. 16.

¹³ Kentucky State Planning Board, Preliminary Report on a Series of State Planning Studies, September 1934, pp. 1-33.

¹⁴ Iowa State Planning Board, Progress Report, September 1934, p. 58.

¹⁵ Ibid, p. 62.

¹⁶ Ibid, p. 64.

¹⁷ Ibid, p. 66.

¹⁸ Missouri State Planning Board, Preliminary Report, 1934, p. 74.

¹⁹ Ohio State Planning Board, Preliminary Report on State Planning Studies, Aug. 15, 1934, ch. II, p. 26.

²⁰ Ibid, ch. I, p. 23.

²¹ Indiana State Planning Board, Preliminary Report, vol. I, map 91-a.

²² New Mexico State Planning Board, Progress Report, Apr. 15, 1937, p. 91.

APPENDIX

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(As of June 15, 1935)

- BETTMAN, ALFRED, 1514 First National Bank Building, Cincinnati, Ohio; District No. 5. *Ohio, Indiana, Kentucky, West Virginia, Tennessee.*
- CUTTER, VICTOR M., 2100 United States Post Office Building and Courthouse, Boston, Mass.; District No. 1. *Maine, New Hampshire, Vermont, Connecticut, Massachusetts, Rhode Island.*
- DANA, MARSHALL N., 220 Federal Courthouse, Portland, Oreg.; District No. 11. *Washington, Oregon, Idaho.*
- McINTOSH, HENRY T., Albany, Ga.; District No. 4. *South Carolina, Georgia, Alabama, Florida.*
- MILES, VINCENT M., Kelley Trust Building, Fort Smith, Ark.; District No. 6. *Arkansas, Louisiana, Mississippi, Oklahoma, Texas.*
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- PROFESSIONAL AND RESEARCH PROJECTS. Virginia State Planning Board and State Departments, June 1935. Typed ms., 36 pp.
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Regional Land Reports

PROGRESS REPORT OF REGIONAL LAND CONSULTANT FOR IOWA, ILLINOIS, INDIANA, OHIO, AND MISSOURI. June 15, 1935. Typed ms., 37 pp.

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REGIONAL LAND CONSULTANTS REPORT FOR WASHINGTON, OREGON, AND IDAHO. May 1935. Typed ms., 50 pp., maps, charts, tables.

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ANNUAL REPORT OF REGIONAL LAND CONSULTANT FOR NEVADA, UTAH, ARIZONA AND NEW MEXICO. September 1, 1934, to June 15, 1935. Typed ms., 12 pp.

STATE PLANNING PROCEDURE FOR WISE UTILIZATION OF LAND. Regional land consultant for District IX, April 27, 1935. Typed ms., 9 pp.

CIRCULARS ISSUED BY THE NATIONAL RESOURCES BOARD

June 30, 1934, to June 15, 1935

- ORGANIZATION AND FUNCTIONS, circular I, August 15, 1934. Describing the membership of the new National Resources Board, its organization into six sections, and its general functions.
- STATUS OF ORGANIZATION OF PLANNING DISTRICTS AND STATE PLANNING BOARDS, circular II. Listing each State Planning Board, membership of each, and the names and assignments of planning consultants. Periodically revised, this circular replaces the National Planning Board's sixth circular letter.
- DIGEST OF EXPERIENCE OF STATE PLANNING CONSULTANTS, circular III, February 11, 1935. A summary of the consultants' views and experience relative to the basic problems and procedures of State planning.
- WHAT THE GOVERNORS THINK OF STATE PLANNING, circular IV, February 12, 1935. A series of excerpts

- from public addresses made by various Governors relative to the value of State planning.
- STATE PLANNING ACTS, circular V, February 20, 1935. Transmitting copies of the nine State planning laws enacted between July 1933 and February 1935. This circular replaced and superseded the National Planning Board's eighth circular letter.
- PRELIMINARY BIBLIOGRAPHY OF STATE PLANNING REPORTS IN THE LIBRARY OF THE NATIONAL RESOURCES BOARD, circular VI, May 19, 1935.
- CLASSIFICATION OF PLANNING MATERIAL IN STATE PLANNING BOARD LIBRARIES, circular VII, April 8, 1935. A suggested system for the filing of data, prepared in collaboration with Harvard School of City Planning.

CIRCULAR LETTERS ISSUED BY THE NATIONAL PLANNING BOARD

July 20, 1933, to June 30, 1934

- SUGGESTIONS TO REGIONAL ADVISERS, first circular letter, August 21, 1933. A brief series of suggestions regarding the preliminaries to formulation of regional plans, the coordination of interstate projects, planning tests of proposed public-works projects, and the contacts with State organizations for the purpose of collecting information for planning work.
- SUGGESTIONS TO REGIONAL ADVISERS, second circular letter, September 30, 1933. Specific suggestions as to procedure for regional planning, defining the different types of geographical, political, and economic units, and the first steps toward forming an organization for planning. Attached to the second letter was a suggestive outline of the basic material and the data required for planning, together with a list of leading references compiled by the school of city planning, Harvard University.
- PROGRESS REPORT: STATUS AND STIMULATION OF PLANNING REGIONS, STATES AND CITIES, third circular letter, October 25, 1933. A general survey of all types of planning progress in the 10 National Planning Board regions.
- LARGE SCALE REGIONAL AND RURAL LAND PLANNING, fourth circular letter, November 7, 1933. Transmitting copies of four addresses on the subject presented before the regional conference of city planning and the American Civic Association, Baltimore, Md., October 11, 1933.
- FEDERAL ASSISTANCE FOR PLANNING, fifth circular letter, December 11, 1933. Announcing the six conditions under which the National Planning Board would assign qualified planning experts to State or regional planning agencies. The funds for this were allocated to the National Planning Board by the Public Works Administration to supplement the latter's related activities.
- STATUS OF ORGANIZATION OF PLANNING DISTRICTS AND STATE PLANNING BOARDS, sixth circular letter. This listed State and regional planning organizations, the office address and the membership of each. After periodic revisions it was superseded by the National Resources Board's, circular II.

- SUGGESTIONS TO STATE PLANNING CONSULTANTS, seventh circular letter, March 22, 1934. A statement of their general duties, such as the submission of a planning report in 6 months, and suggestions as to technical and administrative procedure.
- STATE PLANNING LEGISLATION, eighth circular letter, March 22, 1934. Transmitting copy of the Harvard School of City Planning model State planning act, copy of the Maryland State planning act of 1933, copy of the State planning act of Washington, 1934, and a series of excerpts from a State planning bill then pending in the Massachusetts Legislature.
- Ninth circular letter, April 27, 1934. Transmitting copies of four papers on subjects relating to regional planning, which were presented for discussion at the session of the city planning division during the annual meeting of the American Society of Civil Engineers held in New York City, January 18, 1934.
- COOPERATION FOR PLANNING BETWEEN STATE, REGIONAL, AND LOCAL PLANNING AGENCIES, THE NATIONAL PLANNING BOARD, AND THE FEDERAL EMERGENCY RELIEF ADMINISTRATION, tenth circular letter, May 3, 1934.
- STATUS OF CITY AND REGIONAL PLANNING IN THE UNITED STATES, eleventh circular letter, May 15, 1934. Report prepared by the staff of the National Planning Board through the assistance of the Federal Civil Works Administration (project F-92). A summary of the activities of the National Planning Board in connection with stimulating city, county, State, and regional planning and describing the assistance rendered to planning by the Civil Works Administration.
- GEOLOGICAL SURVEY MATERIAL FOR STATE PLANNING BOARDS, twelfth circular letter, May 22, 1934. Transmitting to State planning boards, through the cooperation of the United States Geological Survey, copies of (1) Supplementary Index to River Surveys; and (2) Preliminary List of Reports on Water Power Resources.
- STATE PLANNING PROGRESS, thirteenth circular letter, May 31, 1934. A summary of the progress made and the program of work to be done in each State.

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